



6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 52 and 81

[EPA-R05-OAR-2010-0899; FRL-9842-3]

**Approval and Promulgation of Air Quality Implementation Plans;
Illinois; Redesignation of the Chicago Area to Attainment of the
1997 Annual Fine Particulate Matter Standard**

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: EPA is proposing to grant a redesignation request and State Implementation Plan (SIP) revision request submitted by the state of Illinois on October 15, 2010, and supplemented on September 16, 2011, and May 6, 2013. The Illinois Environmental Protection Agency (IEPA) requested EPA to redesignate the Illinois portion of the Chicago-Gary-Lake County, Illinois-Indiana (IL-IN) nonattainment area to attainment of the 1997 annual fine particulate matter (PM_{2.5}) National Ambient Air Quality Standard (NAAQS or standard) and requested EPA approval of Illinois' PM_{2.5} maintenance plan and PM_{2.5}-related emission inventories for this area as revisions of the Illinois SIP. The Illinois portion (Chicago area) of this nonattainment area is: Cook, DuPage, Kane, Lake, McHenry, and Will Counties, Aux Sable and Goose Lake Townships in Grundy County, and Oswego Township in Kendall County. EPA is proposing to grant the state's

redesignation request and to approve the requested Illinois SIP revisions, including the state's plan for maintaining attainment of the 1997 annual PM_{2.5} NAAQS in this area through 2025. EPA is also proposing to approve Illinois' 2008 and 2025 Nitrogen Oxides (NO_x) and PM_{2.5} Motor Vehicle Emission Budgets (MVEBs) for the Chicago area. Finally, EPA is proposing to approve Illinois' 2002 NO_x, Sulfur Dioxide (SO₂), Volatile Organic Compound, ammonia, and primary PM_{2.5} emission inventories for this area. In the context of this proposal to redesignate the Chicago area, EPA addresses a number of additional issues, including the effects of two decisions of the United States Court of Appeals for the District of Columbia (D.C. Circuit or Court): the Court's August 21, 2012, decision to vacate and remand to EPA the Cross-State Air Pollution Rule (CSAPR); and the Court's January 4, 2013, decision to remand to EPA two final rules implementing the 1997 PM_{2.5} standard.

DATES: Comments must be received on or before [INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R05-OAR-2010-0899, by one of the following methods:

- <http://www.regulations.gov>: Follow the on-line instructions for submitting comments.
- *E-mail*: aburano.douglas@epa.gov.
- *Fax*: (312) 408-2279.

- *Mail:* Douglas Aburano, Chief, Attainment Planning and Maintenance Section, (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, Chicago, Illinois 60604.

- *Hand Delivery:* Douglas Aburano, Chief, Attainment Planning and Maintenance Section, Air Programs Branch, (AR-18J), U.S. Environmental Protection Agency, 77 West Jackson Boulevard, 18th Floor, Chicago, Illinois 60604. Such deliveries are only accepted during the Regional Office's normal hours of operation, and special arrangements should be made for deliveries of boxed information. The Regional Office official hours of business are Monday through Friday, 8:30 a.m. to 4:30 p.m., excluding Federal holidays.

Instructions: Direct your comments to Docket ID No. EPA-R05-OAR-2010-0899. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through www.regulations.gov or e-mail. The www.regulations.gov website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment.

If you send an e-mail comment directly to EPA without going through www.regulations.gov, your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects and viruses. For additional instructions on submitting comments, go to section I of the SUPPLEMENTARY INFORMATION section of this document.

Docket: All documents in the docket are listed in the www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in www.regulations.gov or in hard copy at the U.S. Environmental Protection Agency, Region 5, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604. This facility is

open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding Federal holidays. We recommend that you telephone Edward Doty at (312) 886-6057 before visiting the Region 5 office.

FOR FURTHER INFORMATION CONTACT: Edward Doty, Environmental Scientist, Attainment Planning and Maintenance Section, Air Programs Branch (AR-18J), Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois 60604, (312) 886-6057, or Doty.Edward@epa.gov.

SUPPLEMENTARY INFORMATION: Throughout this document, whenever "we," "us," or "our" is used, we mean EPA. This supplementary information section is arranged as follows:

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I. What Should I Consider As I Prepare My Comments for EPA?

When submitting comments, remember to:

1. Identify the rulemaking by docket number and other identifying information (subject heading, Federal Register date and page number).

2. Follow directions - EPA may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.

3. Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.

4. Describe any assumptions and provide any technical information and/or data you used.

5. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

6. Provide specific examples to illustrate your concerns, and suggest alternatives.

7. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

8. Make sure to submit your comments by the comment period deadline identified in the proposed rule.

II. What Actions Is EPA Proposing?

EPA is proposing to take several actions related to the redesignation of the Chicago area to attainment of the 1997 annual PM_{2.5} NAAQS. EPA is proposing to determine that the Chicago-Gary-Lake County, IL-IN area has attained the 1997 annual PM_{2.5} NAAQS based on quality assured, certified 2007-2012 air quality data. EPA is proposing to grant the redesignation

of the Chicago area to attainment of the 1997 annual PM_{2.5} NAAQS.

EPA proposes to find that Illinois' PM_{2.5} maintenance plan meets the requirements of section 175A of the Clean Air Act (CAA) and is proposing to approve Illinois' PM_{2.5} maintenance plan for the 1997 annual PM_{2.5} NAAQS for the Chicago area as a revision to the Illinois SIP. The PM_{2.5} maintenance plan provides for the maintenance of the 1997 annual PM_{2.5} NAAQS in the Chicago-Gary-Lake County, IL-IN area through 2025. The state of Illinois has committed to revising this maintenance plan to cover an additional 10 years within eight years after EPA approves the redesignation of the Chicago area to attainment of the 1997 annual PM_{2.5} NAAQS.

EPA is proposing to approve Illinois' 2008 and 2025 primary PM_{2.5} (fine particulates directly emitted by on-road motor vehicles) and NO_x MVEBs for the Chicago area. In addition, EPA is proposing to find these MVEBs as adequate for purposes of transportation and general conformity demonstrations and determinations.

Finally, EPA is proposing to approve Illinois' 2002 primary PM_{2.5}, NO_x, SO₂, Volatile Organic Compound (VOC), and ammonia emission inventories for the Chicago area as satisfying the requirement of section 172(c)(3) of the CAA for a current, accurate, and comprehensive emission inventory.

III. What Is the Background for These Actions?

Fine particulate pollution can be emitted directly from a source (primary PM_{2.5}) or formed secondarily through chemical reactions in the atmosphere involving precursor pollutants¹ emitted from a variety of sources. Sulfates are a type of secondary fine particulates formed from reactions involving SO₂ emissions from power plants and industrial facilities. Nitrates, another common type of secondary particulate, are formed from combustion emissions of NO_x (primarily Nitrogen Oxide (NO) and Nitrogen Dioxide (NO₂)) from power plants, mobile sources, and other combustion sources.

EPA promulgated the first air quality standards for PM_{2.5} on July 18, 1997, at 62 FR 38652. In this rulemaking, EPA promulgated an annual standard at a level of 15 micrograms per cubic meter (µg/m³) of ambient air, based on a three-year average of the annual mean PM_{2.5} concentrations at each monitoring site (the site's PM_{2.5} design value for the annual standard). In the same rulemaking, EPA promulgated a 24-hour PM_{2.5} standard at a level of 65 µg/m³, based on a three-year average of the annual 98th percentile of 24-hour PM_{2.5} concentrations at each monitoring site.

On January 5, 2005, at 70 FR 944, EPA published air quality area designations for the 1997 annual PM_{2.5} standard based on

¹ Generally NO_x, SO₂, VOC, ammonia (NH₃), and primary PM_{2.5}.

air quality data for calendar years 2001-2003. In that rulemaking, EPA designated the Chicago-Gary-Lake County, IL-IN area as nonattainment for the 1997 annual PM_{2.5} standard. This area includes the Chicago area in Illinois and Lake and Porter Counties in Indiana.

On October 17, 2006, at 71 FR 61144, EPA retained the annual PM_{2.5} standard at 15 µg/m³ (2006 annual PM_{2.5} standard), but revised the 24-hour PM_{2.5} standard to 35 µg/m³, based again on the three-year average of the annual 98th percentile of the 24-hour PM_{2.5} concentrations. In response to legal challenges of the 2006 annual PM_{2.5} standard, the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit) remanded this standard to EPA for further consideration. See *American Farm Bureau Federation and National Pork Producers Council, et al. v. EPA*, 559 F.3d 512 (D.C. Cir. 2009). Since the Chicago area is designated as nonattainment for the 1997 annual PM_{2.5} standard, today's proposed action addresses redesignation of this area only for the 1997 annual PM_{2.5} standard.

On November 27, 2009, EPA made a final determination that the Chicago area had attained the 1997 annual PM_{2.5} standard (76 FR 62243). This determination of attainment for the 1997 annual PM_{2.5} standard was based on quality-assured annual-averaged PM_{2.5} concentrations for PM_{2.5} monitoring sites in the Chicago-Gary-Lake County, IL-IN area for the period of 2006-2008. Based

on our review of complete, quality-assured, and state-certified ambient PM_{2.5} monitoring data from 2009-2012 in the Chicago-Gary-Lake County, IL-IN area, we are proposing to determine that the Chicago area continues to attain the 1997 annual PM_{2.5} NAAQS.

On October 15, 2010, IEPA submitted a request to EPA for the redesignation of the Chicago area to attainment of the 1997 annual PM_{2.5} NAAQS and for EPA approval of a SIP revision containing emission inventories and a maintenance plan for the area. The maintenance plan also includes 2008 and 2025 MVEBs for the Chicago area. In a supplemental submission to EPA on September 16, 2011, the IEPA revised the on-road mobile source emissions and MVEBs in the original submittal to reflect the use of EPA's MOVES model to calculate mobile source emissions. In a supplemental submission to EPA on May 6, 2013, the IEPA submitted VOC and ammonia emission inventories to supplement the emission inventories that had previously been submitted to explain the attainment of the 1997 annual PM_{2.5} standard in the Chicago-Gary-Lake County, IL-IN area and to demonstrate future maintenance of the PM_{2.5} standard in this area.

In this proposed redesignation, EPA takes into account two recent decisions of the D.C. Circuit. In the first of the two Court decisions, the D.C. Circuit, on August 21, 2012, issued *EME Homer City Generation, L.P. v. EPA*, 696 F.3d 7 (D.C. Cir.

2012), which vacated and remanded Cross-State Air Pollution Rule (CSAPR) and ordered EPA to continue administering the Clean Air Interstate Rule (CAIR) "pending . . . development of a valid replacement." *EME Homer City* at 38. The D.C. Circuit denied all petitions for rehearing on January 24, 2013.² In the second decision, on January 4, 2013, in *Natural Resources Defense Council v. EPA*, the D.C. Circuit remanded to EPA the "Final Clean Air Fine Particle Implementation Rule" (72 FR 20586, April 25, 2007) and the "Implementation of the New Source Rule (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM_{2.5})" final rule (73 FR 28321, May 16, 2008). 706 F.3d 428 (D.C. Cir. 2013).

IV. What Are the Criteria for Redesignation to Attainment?

The CAA sets forth the requirements for redesignating a nonattainment area to attainment of a NAAQS. Specifically, section 107(d)(3)(E) of the CAA allows for redesignation provided that: (1) the Administrator determines that the area has attained the applicable NAAQS based on current air quality data; (2) the Administrator has fully approved an applicable SIP for the area under section 110(k) of the CAA; (3) the

² On March 29, 2013, EPA and other parties filed petitions in the Supreme Court seeking *certiorari* of the D.C. Circuit's decision in *EME Homer City*. On June 24, 2013, the Supreme Court consolidated the petitions and granted *certiorari*. The Supreme Court's decision to grant the petition is not a decision on the merits but instead a decision to review the case on its merits. As such, it does not alter the current status of CAIR or CSAPR. At this time, CAIR remains in place.

Administrator determines that the improvement in air quality is due to permanent and enforceable emission reductions resulting from the implementation of the applicable SIP, Federal air pollution control regulations and other permanent and enforceable emission reductions; (4) the Administrator has fully approved a maintenance plan for the area meeting the requirements of section 175A of the CAA; and, (5) the state containing the area has met all requirements applicable to the area for purposes of redesignation under section 110 and part D of the CAA.

V. What is EPA's Analysis of the State's Request?

A. Has the Area Achieved Attainment of the 1997 Annual PM_{2.5} Standard?

In a final rulemaking dated November 27, 2009, at 76 FR 62243, EPA determined that the Chicago-Gary-Lake County, IL-IN area had attained the 1997 annual PM_{2.5} standard. This determination was based on complete, quality-assured monitoring data in this area for the calendar years of 2006-2008.

In its September 16, 2011, redesignation request, Illinois presents quality-assured, state-certified PM_{2.5} data for the period of 2007-2009. These data show that the Chicago-Gary-Lake County, IL-IN area attained the 1997 annual PM_{2.5} standard through 2009.

We have also obtained quality-assured and state-certified data for the states of Illinois and Indiana for 2010, 2011, and 2012. Data recorded in EPA's AQS show that the Chicago-Gary-Lake County, IL-IN area initially attained the 1997 annual PM_{2.5} standard beginning in 2005-2007, and this area has continued to attain this standard through 2012.³

Table 1 provides a summary of the PM_{2.5} annual air quality data for the Chicago-Gary-Lake County, IL-IN area for the period of 2007-2012. These data have been quality-assured and certified by the states of Illinois and Indiana.

Table 1. PM_{2.5} Annual Average Concentrations for the Chicago-Gary-Lake County, IL-IN PM_{2.5} Nonattainment Area (in $\mu\text{g}/\text{m}^3$)

County	Monitoring Site	2007	2008	2009	2010	2011	2012
Illinois Monitoring Sites							
Cook	Blue Island	14.3	12.5	11.7	11.6	11.6	10.9
Cook	Chicago-Commonwealth Edison	14.3	11.9	11.1	12.3	11.3	11.3
Cook	Chicago-Springfield	15.2	12.0	11.3	12.0 (2)	11.5 (2)	11.9
Cook	Chicago-Mayfair	15.5	12.2	12.7	12.6	11.8	11.6
Cook	Chicago-SE Police	14.1	11.8	11.0	12.5	N/A	N/A
Cook	Chicago-Washington	15.7	12.5	11.6	14.0	12.6	11.5
Cook	Cicero	14.8	13.3 (2)	12.8 (2)	11.9	11.4	10.4
Cook	Des Plaines	12.7	11.4	11.0	10.6	10.6	10.9
Cook	McCook (1)	15.6	12.9	12.6	12.6	12.6	12.6
Cook	Northbrook	13.2	10.1	9.3	9.3	10.2	10.2
Cook	Schiller Park (1)	15.4	13.6 (2)	12.9	12.6	13.3	13.1
Cook	Summit	14.8	12.0	11.6	12.2	11.0	11.3
DuPage	Naperville	13.8	11.3	9.8	11.7	10.5	10.1
Kane	Aurora	13.2	10.3	10.0	11.3	9.8	10.0
Kane	Elgin	14.5	10.8	9.8	11.4	10.8	9.9
Lake	Zion	11.9	9.3	8.8	9.7	N/A	N/A
McHenry	Cary	11.6	10.1	9.6	10.2	10.1	10.1
Will	Braidwood	12.1 (2)	10.3	8.7	10.0	10.4	9.3
Will	Joliet	14.6	11.7	10.5	11.8	10.2	11.1
Indiana Monitoring Sites							

³ Preliminary data for 2012 show that the Chicago-Gary-Lake County, IL-IN area continues to attain the 1997 annual PM_{2.5} standard through 2012.

Lake	Franklin School	14.4	12.0	11.3	12.5	11.4	10.7
Lake	Griffith	13.2	11.7	11.0	12.4	11.2	N/A
Lake	Madison Street	14.6	12.3	12.1	12.9	12.1	11.5
Lake	Hammond-Purdue	13.8	11.7	15.9	12.3	11.4	10.6
Lake	Clark High School	13.7	12.4	10.8	11.9	10.7	10.5
Porter	Ogden Dunes	13.8	10.9	11.3	11.6	10.6	9.9

Notes: (1) Annual standard for PM_{2.5} does not apply to these sites due to their proximity to industrial or roadway sources and lack of representation of general population exposure; and (2) the data for these sites and years do not meet data completeness requirements (see a discussion of this issue below).

Table 2 gives the three-year averages of the annual PM_{2.5} concentrations for 2007-2009, 2008-2010, 2009-2011, and 2010-2012 for each of the PM_{2.5} monitoring sites in the Chicago-Gary-Lake County, IL-IN PM_{2.5} nonattainment area.

Table 2. Three-Year Averages of Annual Average PM_{2.5} Concentrations in the Chicago-Gary-Lake County, IL-IN PM_{2.5} Nonattainment Area

County	Monitoring Site	2007-2009	2008-2010	2009-2011	2010-2012
Illinois Monitoring Sites					
Cook	Blue Island	12.8	11.9	11.6	11.4
Cook	Chicago-Commonwealth Edison	12.4	11.8	11.6	11.6
Cook	Chicago-Springfield	12.8	11.8	11.6	11.6
Cook	Chicago-Mayfair	13.5	12.5	12.4	12.0
Cook	Chicago-SE Police	12.3	11.8	N/A	N/A
Cook	Chicago-Washington	13.3	12.7	12.7	12.7
Cook	Cicero	13.1	12.7	12.0	11.2
Cook	Des Plaines	11.7	11.0	10.7	10.7
Cook	McCook	13.7	12.7	12.6	12.6
Cook	Northbrook	10.9	9.6	9.6	9.9
Cook	Schiller Park	14.0	13.0	12.9	13.0
Cook	Summit	12.8	11.9	11.6	11.5
DuPage	Naperville	11.6	10.9	10.7	10.8
Kane	Aurora	11.2	10.5	10.4	10.4
Kane	Elgin	11.6	10.7	10.7	10.7
Lake	Zion	10.0	9.3	N/A	N/A
McHenry	Cary	10.4	10.0	10.0	10.1
Will	Braidwood	10.4	9.7	9.7	9.9
Will	Joliet	10.2	11.3	10.8	11.0
Indiana Monitoring Sites					
Lake	Franklin School	11.4	11.9	11.7	11.5
Lake	Griffith	11.2	11.7	11.5	N/A
Lake	Madison Street	12.1	12.4	12.4	12.2
Lake	Hammond-Purdue	11.4	13.3	13.2	11.4
Lake	Clark High School	10.7	11.7	11.1	11.0
Porter	Ogden Dunes	10.6	11.3	11.2	10.7

The data in tables 1 and 2 show that all PM2.5 monitors in the Chicago-Gary-Lake County, IL-IN area have recorded PM2.5 concentrations attaining the 1997 annual PM2.5 standard during the most recent three years of quality-assured, state-certified of PM2.5 data collection. As noted above, however, the PM2.5 data for several sites in table 1 need further discussion.

First, under 40 CFR 58.30(a)(1), for monitoring sites with data that are representative of relatively unique, generally localized concentrations, the data are compared only to the 24-hour PM2.5 NAAQS, and not to the annual PM2.5 NAAQS. Illinois has two sites, McCook and Schiller Park, that the IEPA believes are not representative of exposure for the general populace due to the proximity of these sites to localized industrial or roadway sources. EPA is not judging whether this designation is appropriate. The applicable regulation, at 40 CFR 58.30(a)(2), recognizes that some microscale sites collect data that are representative of multiple locations with localized high concentrations, and provides in these cases that the data are appropriate for comparison to the annual PM2.5 standard. The Schiller Park site is near a major highway, and the site may be representative of multiple locations in the Chicago area that have similar proximity to major highways. For this reason, Table 1 above includes annual mean PM2.5 concentrations for this

site. In any case, this site shows annual mean PM2.5 concentrations that meet the 1997 annual PM2.5 standard.

With regard to the McCook monitoring site, we agree with the IEPA that this is a monitoring site that is located near a localized industrial source and produces PM2.5 concentrations that are not generally representative of exposure for the general populace on a long-term basis. As such, in keeping with 40 CFR 58.30(a)(1), the annual mean PM2.5 concentrations at this site should not be compared to the 1997 annual PM2.5 standard when judging the attainment status of the Chicago-Gary-Lake County, IL-IN area. In any case, this site also shows annual mean PM2.5 concentrations that meet the 1997 annual PM2.5 standard.

EPA concludes that no violation of the 1997 annual PM2.5 standard has been recorded in the Chicago-Gary-Lake County, IL-IN area for any three-year period during 2007-2012. For the reasons discussed above, EPA proposes to determine that the Chicago-Gary-Lake County, IL-IN area has attained the 1997 annual PM2.5 standard.

Illinois commits to continue monitoring PM2.5 in the Chicago area according to an EPA-approved monitoring plan, as required to confirm and assure maintenance of the 1997 annual PM2.5 standard in this area. If changes in the PM2.5 monitoring system become necessary, IEPA will work with EPA to ensure the

continued adequacy of the monitoring system. Illinois will continue to quality-assure the monitoring data to meet the requirements of 40 CFR part 58.

B. Has the Chicago Area and the State of Illinois Met All Applicable Requirements of Section 110 and Part D of the Clean Air Act, and Does the Chicago Area Have a Fully Approved SIP Under Section 110(k) of the Clean Air Act for Purposes of Redesignation to Attainment?

We are proposing to find that Illinois has met all currently applicable SIP requirements for the purposes of redesignation of the Chicago area under section 110 of the CAA (general SIP requirements). We are also proposing to find that the Illinois SIP meets all SIP requirements currently applicable for purposes of redesignation under part D of title I of the CAA, in accordance with section 107(d)(3)(E)(v) of the CAA. We are proposing to find that all applicable requirements of the Illinois SIP, for purposes of redesignation, have been implemented, in accordance with section 107(d)(3)(E)(ii) of the CAA. As discussed below, in this section, EPA is proposing to approve Illinois' 2002 NO_x, SO₂, and PM_{2.5} emissions inventory and 2007 VOC and ammonia emissions inventory as meeting the section 172(C)(3) requirement for a comprehensive emissions inventory.

In making these proposed determinations, we have ascertained which SIP requirements are applicable for purposes of redesignation, and have concluded that there are SIP measures meeting these requirements and that they are approved or will be approved by the time of final rulemaking on the State's PM2.5 redesignation request.

1. Illinois Has Met All Applicable Requirements for Purposes of Redesignation of the Chicago Area Under Section 110 and Part D of the Clean Air Act

a. Section 110 General SIP Requirements

Section 110(a) of title I of the CAA contains the general requirements for a SIP. Section 110(a)(2) provides that the implementation plan submitted by a state must have been adopted by the state after reasonable public notice and hearing, and, among other things, must: (1) include enforceable emission limitations and other control measures, means or techniques necessary to meet the requirements of the CAA; (2) provide for establishment and operation of appropriate devices, methods, systems and procedures necessary to monitor ambient air quality; (3) provide for implementation of a source permit program to regulate the modification and construction of any stationary source within the areas covered by the plan; (4) include provisions for the implementation of part C, Prevention of Significant Deterioration (PSD) and part D, New Source Review

(NSR) permit programs; (5) include criteria for stationary source emission control measures, monitoring and reporting; (6) include provisions for air quality modeling; and (7) provide for public and local agency participation in planning and emission control rule development.

Section 110(a)(2)(D) of the CAA requires that SIPs contain measures to prevent sources in a state from significantly contributing to air quality problems in another state. However, the section 110(a)(2)(D) SIP requirements are not linked with a particular area's designation and classification. EPA believes that the requirements linked with an area's designation and classification are the relevant measures to evaluate in reviewing a redesignation request. The section 110(a)(2)(D) requirements, where applicable, continue to apply to a state regardless of the designation of any one particular area in the state. Thus, we believe that these requirements are not applicable requirements for purposes of redesignation.

Further, we believe that section 110(a)(2) elements other than those described above that are not connected with nonattainment plan submissions and that are not linked with an area's attainment status are also not applicable requirements for purposes of redesignation. A state remains subject to these requirements regardless of an area's designation and after the area is redesignated to attainment. We conclude that only the

section 110 and part D requirements that are linked with an area's designation and classification are the relevant measures which we must consider in evaluating a redesignation request. This approach is consistent with EPA's policy on applicability of conformity and oxygenated fuels requirements for redesignation purposes, as well as with section 184 ozone transport requirements. See Reading, Pennsylvania, proposed and final rulemakings (61 FR 53174-53176, October 10, 1996) and (62 FR 24826, May 7, 1997); Cleveland-Akron-Lorain, Ohio, final rulemaking (61 FR 20458, May 7, 1996); and Tampa, Florida, final rulemaking (60 FR 62748, December 7, 1995). See also the discussion of this issue in the Cincinnati, Ohio 1-hour ozone redesignation (65 FR 3780, June 19, 2000), and in the Pittsburgh, Pennsylvania 1-hour ozone redesignation (66 FR 50399, October 19, 2001).

We have reviewed the Illinois SIP and have concluded that it meets the general SIP requirements under section 110 of the CAA to the extent they are applicable to the state's request for redesignation. EPA has previously approved provisions of the Illinois SIP addressing section 110 requirements, including provisions addressing particulate matter, at 40 CFR 52.720. In a submittal dated December 12, 2007, Illinois addressed infrastructure SIP elements required under section 110(a)(2) of the CAA for PM_{2.5} under the 1997 annual PM_{2.5} standard. EPA

approved this submittal on August 12, 2011, at 76 FR 41075. The requirements of section 110(a)(2), however, are statewide SIP requirements that are not linked to the PM2.5 nonattainment status of the Chicago area. Therefore, EPA believes that these infrastructure elements are not applicable requirements for purposes of review of the state's PM2.5 redesignation request.

b. Part D Requirements

EPA has determined that, if EPA approves the base year emissions inventories, discussed in section V.F below, the Illinois SIP will meet the SIP requirements applicable for purposes of redesignation under part D of the CAA for the Chicago area.

Subpart 1 of part D, found in sections 172-176 of the CAA, sets forth the basic nonattainment requirements applicable for nonattainment areas.

Subpart 1 Section 172 Requirements

The applicable subpart 1 requirements are contained in sections 172(c)(1)-(9) of the CAA. A thorough discussion of the requirements contained in section 172 can be found in the General Preamble for Implementation of title I (57 FR 13498, April 16, 1992).

Section 172(c)(1) requires the state plans for all nonattainment areas to provide for the implementation of Reasonably Available Control Measures (RACM) as expeditiously as

practicable. EPA interprets this requirement to impose a duty on all states with nonattainment areas to consider all available control measures and to adopt and implement such measures as are reasonably available for implementation in these areas as components of the areas' attainment demonstrations (the attainment demonstrations must address RACM). Because attainment of the 1997 annual PM_{2.5} NAAQS has been achieved in the Chicago-Gary-Lake County, IL-IN area, no additional RACM measures are needed to provide for attainment, and the section 172(c)(1) requirements are no longer considered to be applicable as a prerequisite for approval of Illinois' redesignation request, provided the area continues to attain the standard until the redesignation of the Chicago area occurs. See 40 CFR 51.1004(c).

Section 172(c)(2) requires plans for all nonattainment areas to provide for reasonable further progress (RFP) toward attainment of the NAAQS. This requirement is not relevant for purposes of redesignation because the Chicago-Gary-Lake County, IL-IN area has monitored attainment of the 1997 annual PM_{2.5} NAAQS (General Preamble, 57 FR 13564). See also 40 CFR 51.1009. In addition, because the Chicago-Gary-Lake County, IL-IN area has attained the 1997 annual PM_{2.5} NAAQS, the requirement for RFP under section 172(c)(2), as well as the requirement for

contingency measures under section 172(c)(9), is not applicable for purposes of redesignation. *Id.*

Section 172(c)(3) requires submission and EPA approval of a comprehensive, accurate and current inventory of actual emissions. Illinois submitted a 2002 base year emissions inventory for primary PM_{2.5}, NO_x, and SO₂ in June 2006, and documented this emissions inventory in a June 2006 publication titled "Illinois Base Year Particulate Matter and Haze Inventory for 2002". As discussed below in section V.F, EPA is proposing to approve Illinois' 2002 base year emission inventories as meeting the section 172(c)(3) emission inventory requirement for the Chicago area.

Section 172(c)(4) requires the identification and quantification of emissions for major new and modified stationary sources to be allowed in an area, and section 172(c)(5) requires source permits for the construction and operation of new and modified major stationary sources in the nonattainment area. EPA approved Illinois NSR program⁴ on December 17, 1992 (57 FR 59928), September 27, 1995 (60 FR 49780), and May 13, 2003 (68 FR 25504). Further, EPA has determined that, since PSD requirements⁵ will apply after

⁴ The NSR program controls the growth and permitting of major source emissions in nonattainment areas.

⁵ PSD requirements control the growth of new source emissions in areas designated as attainment for a NAAQS.

redesignation, the Chicago area and the state of Illinois need not comply with the requirement that a NSR program be approved prior to redesignation, provided that the state demonstrates maintenance of the NAAQS without implementation of part D NSR. A more detailed rationale for this view is described in a memorandum from Mary Nichols, Assistant Administrator for Air and Radiation, dated October 14, 1994, titled, "Part D New Source Review Requirements for Areas Requesting Redesignation to Attainment" (Nichols memorandum). Illinois has demonstrated that the Chicago-Gary-Lake County, IL-IN area will be able to maintain the 1997 annual PM_{2.5} standard without the continued implementation of the state's part D NSR program. Therefore, EPA concludes that Illinois need not have a fully approved part D NSR program as an applicable requirement for approval of the state's redesignation request. The state's PSD program will become effective in the Chicago area upon redesignation to attainment of the 1997 PM_{2.5} standard. See redesignation rulemakings for Detroit, Michigan (60 FR 12467-12468, March 7, 1995); Cleveland-Akron-Lorain, Ohio (61 FR 20458, 20469-20470, May 7, 1996); Louisville, Kentucky (66 FR 53665, October 23, 2001); and, Grand Rapids, Michigan (61 FR 31834-31837, June 21, 1996).

Section 172(c)(6) requires the SIP to contain emission control measures necessary to provide for attainment of the

standard. Because attainment has been reached in the Chicago area, no additional measures are needed to provide for attainment of the standard.

Section 172(c)(7) requires the SIP to meet the applicable provisions of section 110(a)(2). As noted above, in section V.B.1.a, we conclude that the Illinois SIP meets the requirements of section 110(a)(2) applicable for purposes of redesignation.

Subpart 1 Section 176(c)(4)(D) Conformity SIP Requirements

Section 176(c) of the CAA requires states to establish criteria and procedures to ensure that Federally-supported or funded activities including highway projects, conform to the air quality planning goals of the SIPs. The requirement to determine conformity applies to transportation plans, programs and projects developed, funded or approved under title 23 of the U.S. Code and the Federal Transit Act (transportation conformity), as well as to all other federally-supported or funded projects (general conformity). State conformity SIP revisions must be consistent with Federal conformity regulations relating to consultation, enforcement and enforceability, which EPA promulgated pursuant to CAA requirements.

EPA believes that it is reasonable to interpret the conformity SIP requirements as not applying for purposes of evaluating the redesignation request under section 107(d) for

two reasons. First, the requirement to submit SIP revisions to comply with the conformity provisions of the CAA continues to apply to areas after redesignation to attainment since such areas would be subject to section 175A maintenance plans. Second, EPA's Federal conformity rules require the performance of conformity analyses in the absence of Federally-approved state rules. Therefore, because areas are subject to the conformity requirements regardless of whether they are redesignated to attainment and, because they must implement conformity under Federal rules if state rules are not yet approved, EPA believes it is reasonable to view these requirements as not applying for purposes of evaluating a redesignation request. See *Wall v. EPA*, 265 F.3d 426 (6th Cir. 2001), upholding this interpretation. See also 60 FR 62748, 62749-62750 (December 7, 1995) (Tampa, Florida).

EPA approved Illinois' general conformity SIP on December 23, 1997 (62 FR 67000). Illinois does not have a Federally-approved transportation conformity SIP. However, Illinois performs conformity analyses pursuant to EPA's Federal conformity rules. Illinois has submitted on-road mobile source emission budgets for the Chicago area of 5,100 tons per year (TPY) of primary PM_{2.5} and 127,951 TPY of NO_x for 2008 and 2,377 TPY of primary PM_{2.5} and 44,224 TPY of NO_x for 2025, respectively. Illinois must use these MVEBs in any conformity

determination that is effective on or after the effective date of the PM_{2.5} maintenance plan approval and effective date of EPA's approval of the redesignation of the Chicago area to attainment of the 1997 annual PM_{2.5} standard.

2. The Chicago Area Has a Fully Approved Applicable SIP Under Section 110(k) of the CAA

Upon final approval of Illinois's comprehensive 2002 emissions inventories, EPA will have fully approved the Illinois SIP for the Chicago area under section 110(k) of the CAA for all requirements applicable for purposes of redesignation to attainment for the 1997 annual PM_{2.5} NAAQS. EPA may rely on prior SIP approvals when rulemaking on a redesignation request (See page 3 of the September 4, 1992, John Calcagni memorandum titled "Procedures for Processing Requests to Redesignate Areas to Attainment" (Calcagni memorandum); *Southwestern Pennsylvania Growth Alliance v. Browner*, 144 F.3d 984, 989-990 (6th Cir. 1998); *Wall v. EPA*, 265 F.3d 426 (6th Cir. 2001)), plus any additional measures it may approve in conjunction with a redesignation action. See 68 Fr 25413, 25426 (May 12, 2003).

Since the passage of the CAA in 1970, Illinois has adopted and submitted, and EPA has fully approved, SIP provisions addressing various required SIP elements under the particulate matter standards. In this action, EPA is proposing to approve Illinois's 2002 base year emissions inventories for the Chicago

area as meeting the requirement of section 172(c)(3) of the CAA for the 1997 annual PM_{2.5} standard.

3. Nonattainment Requirements

No Illinois SIP provision applicable for redesignation of the Chicago area is currently disapproved, conditionally approved or partially approved.

4. Effect of the January 4, 2013, D.C. Circuit Decision

Regarding PM_{2.5} Implementation Under Subpart 4 of the CAA

a. Background

As discussed above, on January 4, 2013, in *Natural Resources Defense Council v. EPA*, the D.C. Circuit remanded to EPA the "Final Clean Air Fine Particle Implementation Rule" (72 FR 20586, April 25, 2007) and the "Implementation of the New Source Review (NSR) Program for Particulate Matter Less than 2.5 Micrometers (PM_{2.5})" final rule (73 FR 28321, May 16, 2008) (collectively, "1997 PM_{2.5} Implementation Rule"). 706 F.3d 428 (D.C. Cir. 2013). The Court found that EPA erred in implementing the 1997 PM_{2.5} NAAQS pursuant to the general implementation provisions of subpart 1 of part D of title I of the CAA, rather than to the particulate matter-specific provisions of subpart 4 of part D of title I.

b. Proposal on This Issue

In this portion of the redesignation proposed rule, EPA addresses the effect of the Court's January 4, 2013 ruling on

the proposed redesignation. As explained below, EPA is proposing to determine that the Court's January 4, 2013, decision does not prevent EPA from redesignating the Chicago area to attainment. Even in light of the Court's decision, redesignation for this area is appropriate under the CAA and EPA's longstanding interpretations of the CAA's provisions regarding redesignation. EPA first explains its longstanding interpretation that requirements that are imposed, or that become due, after a complete redesignation request is submitted for an area that is attaining the standard, are not applicable for purposes of evaluating a redesignation request. Second, EPA then shows that, even if EPA applies the subpart 4 requirements to Illinois' redesignation request and disregards the provisions of its 1997 PM_{2.5} implementation rule recently remanded by the Court, the state's request for redesignation of this area still qualifies for approval. EPA's discussion takes into account the effect of the Court's ruling on the Chicago area's maintenance plan, which EPA views as approvable when subpart 4 requirements are considered.

i. Applicable Requirements for Purposes of Evaluating the Redesignation Request

With respect to the 1997 PM_{2.5} Implementation Rule, the Court's January 4, 2013, ruling rejected EPA's reasons for implementing the PM_{2.5} NAAQS solely in accordance with the

provisions of subpart 1, and remanded that matter to EPA, so that it could address implementation of the 1997 PM_{2.5} NAAQS under subpart 4 of part D of the CAA, in addition to subpart 1. For the purposes of evaluating Illinois' redesignation request for the Chicago area, to the extent that implementation under subpart 4 would impose additional requirements for areas designated nonattainment, EPA believes that those requirements are not "applicable" for the purposes of CAA section 107(d)(3)(E), and, thus, EPA is not required to consider subpart 4 requirements with respect to the Chicago area redesignation. Under its longstanding interpretation of the CAA, EPA has interpreted section 107(d)(3)(E) to mean, as a threshold matter, that the part D provisions which are "applicable" and which must be approved in order for EPA to redesignate an area include only those which came due prior to a state's submittal of a complete redesignation request. See Calcagni memorandum. See also "State Implementation Plan (SIP) Requirements for Areas Submitting Requests for Redesignation to Attainment of the Ozone and Carbon Monoxide (CO) National Ambient Air Quality Standards (NAAQS) on or after November 15, 1992," Memorandum from Michael Shapiro, Acting Assistant Administrator, Air and Radiation, September 17, 1993 (Shapiro memorandum); Final Redesignation of Detroit-Ann Arbor, (60 FR 12459, 12465-66, March 7, 1995); Final Redesignation of St. Louis, Missouri, (68 FR 25418, 25424-27,

May 12, 2003); *Sierra Club v. EPA*, 375 F.3d 537, 541 (7th Cir. 2004) (upholding EPA's redesignation rulemaking applying this interpretation and expressly rejecting Sierra Club's view that the meaning of "applicable" under the statute is "whatever should have been in the plan at the time of attainment rather than whatever actually was in the plan and already implemented or due at the time of attainment").⁶ In this case, at the time that Illinois submitted its redesignation request, requirements under subpart 4 were not due, and indeed, were not yet known to apply.

EPA's view that, for purposes of evaluating the Chicago area redesignation, the subpart 4 requirements were not due at the time the state submitted the redesignation request is in keeping with the EPA's interpretation of subpart 2 requirements for subpart 1 ozone nonattainment areas redesignated subsequent to the D.C. Circuit's decision in *South Coast Air Quality Mgmt. Dist. v. EPA*, 472 F.3d 882 (D.C. Cir. 2006). In *South Coast*, the Court found that EPA was not permitted to implement the 1997 8-hour ozone standard solely under subpart 1, and held that EPA was required under the statute to implement the standard under the ozone-specific requirements of subpart 2 as well.

⁶ Applicable requirements of the CAA that come due subsequent to the area's submittal of a complete redesignation request remain applicable until a redesignation is approved, but are not required as a prerequisite to redesignation. Section 175A(c) of the CAA.

Subsequent to the *South Coast* decision, in evaluating and acting upon redesignation requests for the 1997 8-hour ozone standard that were submitted to EPA for areas under subpart 1, EPA applied its longstanding interpretation of the CAA that "applicable requirements", for purposes of evaluating a redesignation, are those that had been due at the time the redesignation request was submitted. See, e.g., Proposed Redesignation of Manitowoc County and Door County Nonattainment Areas (75 FR 22047, 22050, April 27, 2010). In those actions, EPA, therefore, did not consider subpart 2 requirements to be "applicable" for the purposes of evaluating whether the area should be redesignated under section 107(d)(3)(E).

EPA's interpretation derives from the provisions of CAA Section 107(d)(3). Section 107(d)(3)(E)(v) states that, for an area to be redesignated, a state must meet "all requirements 'applicable' to the area under section 110 and part D". Section 107(d)(3)(E)(ii) provides that the EPA must have fully approved the "applicable" SIP for the area seeking redesignation. These two sections read together support EPA's interpretation of "applicable" as only those requirements that came due prior to submission of a complete redesignation request. First, holding states to an ongoing obligation to adopt new CAA requirements that arise after the states submit their redesignation requests, in order to be redesignated, would make it problematic or

impossible for EPA to act on redesignation requests in accordance with the 18-month deadline Congress set for EPA action in section 107(d)(3)(D). If "applicable requirements" were interpreted to be a continuing flow of requirements with no reasonable limitation, states, after submitting redesignation requests, would be forced continuously to make additional SIP submissions that in turn would require EPA to undertake further notice-and-comment rulemaking actions to act on those submissions. This would create a regime of unceasing rulemaking that would delay action on the redesignation requests beyond the 18-month timeframe provided by the Act for this purpose.

Second, a fundamental premise for redesignating a nonattainment area to attainment is that the area has attained the relevant NAAQS due to emission reductions from existing controls. Thus, an area, for which a redesignation request has been submitted, would have already attained the NAAQS as a result of satisfying statutory requirements that came due prior to the submission of the request. Absent a showing that unadopted and unimplemented requirements are necessary for future maintenance, it is reasonable to view the requirements applicable for purposes of evaluating the redesignation request as including only those SIP requirements that have already come due. These are the requirements that led to attainment of the NAAQS. To require, for redesignation approval, that a state

also satisfy additional SIP requirements coming due after the state submits its complete redesignation request, and while EPA is reviewing it, would compel the state to do more than is necessary to attain the NAAQS, without a showing that the additional requirements are necessary for maintenance.

In the context of this redesignation, the timing and nature of the Court's January 4, 2013, decision in *NRDC v. EPA* compound the consequences of imposing requirements that come due after the redesignation request is submitted. The state submitted its redesignation request on October 15, 2010, but the Court did not issue its decision remanding EPA's 1997 PM_{2.5} Implementation Rule concerning the applicability of the provisions of subpart 4 until January 2013.

To require the state's fully-completed and pending redesignation request to comply now with requirements of subpart 4 that the Court announced only in January 2013, would be to give retroactive effect to such requirements when the state had no notice that it was required to meet them. The D.C. Circuit recognized the inequity of this type of retroactive impact in *Sierra Club v. Whitman*, 285 F.3d 63 (D.C. Cir. 2002),⁷ where it upheld the District Court's ruling refusing to make retroactive

⁷*Sierra Club v. Whitman* was discussed and distinguished in a recent D.C. Circuit decision that addressed retroactivity in a quite different context, where, unlike the situation here, EPA sought to give its regulations retroactive effect. *National Petrochemical and Refiners Ass'n v. EPA*. 630 F.3d 145, 163 (D.C. Cir. 2010), rehearing denied 643 F.3d 958 (D.C. Cir. 2011), cert denied 132 S. Ct. 571 (2011).

EPA's determination that the St. Louis area did not meet its attainment deadline. In that case, petitioners urged the Court to make EPA's nonattainment determination effective as of the date that the statute required, rather than the later date on which EPA actually made the determination. The Court rejected this view, stating that applying it "would likely impose large costs on States, which would face fines and suits for not implementing air pollution prevention plans . . . even though they were not on notice at the time." *Id.* at 68. Similarly, it would be unreasonable to penalize the state of Illinois by rejecting its redesignation request for an area that is already attaining the 1997 PM_{2.5} standard and that met all applicable requirements known to be in effect at the time of the redesignation request. For EPA now to reject the redesignation request solely because the state did not expressly address subpart 4 requirements, of which it had no notice, would inflict the same unfairness condemned by the Court in *Sierra Club v. Whitman*.

ii. Subpart 4 Requirements and Illinois' Redesignation Request

Even if EPA were to take the view that the Court's January 4, 2013, decision requires that, in the context of pending redesignations, subpart 4 requirements were due and in effect at the time the state submitted its redesignation request, EPA proposes to determine that the Chicago area still

qualifies for redesignation to attainment. As explained below, EPA believes that the redesignation request for the Chicago area, though not expressed in terms of subpart 4 requirements, substantively meets the requirements of that subpart for purposes of redesignating the area to attainment.

With respect to evaluating the relevant substantive requirements of subpart 4 for purposes of redesignating the Chicago area, EPA notes that subpart 4 incorporates components of subpart 1 of part D, which contain general air quality planning requirements for areas designated as nonattainment. See Section 172(c). Subpart 4, itself, contains specific planning and scheduling requirements for PM₁₀⁸ nonattainment areas, and under the Court's January 4, 2013, decision in *NRDC v. EPA*, these same statutory requirements also apply for PM_{2.5} nonattainment areas. EPA has longstanding general guidance that interprets the 1990 amendments to the CAA, making recommendations to states for meeting the statutory requirements for SIPs for nonattainment areas. See, "State Implementation Plans; General Preamble for the Implementation of Title I of the Clear Air Act Amendments of 1990," 57 FR 13498 (April 16, 1992) (the "General Preamble"). In the General Preamble, EPA discussed the relationship of subpart 1 and subpart 4 SIP requirements, and pointed out that subpart 1 requirements were

⁸ PM₁₀ refers to particulates nominally 10 micrometers in diameter or smaller.

to an extent "subsumed by, or integrally related to, the more specific PM-10 requirements." 57 FR 13538 (April 16, 1992). The subpart 1 requirements include, among other things, provisions for attainment demonstrations, RACM, RFP, emissions inventories, and contingency measures.

For the purposes of this redesignation, in order to identify additional requirements which would apply under subpart 4, we are considering the Chicago area to be a "moderate" PM_{2.5} nonattainment area. Under section 188 of the CAA, all areas designated as nonattainment areas under subpart 4 would initially be classified by operation of law as "moderate" nonattainment areas, and would remain as moderate nonattainment areas unless and until EPA reclassifies the areas as "serious" nonattainment areas. Accordingly, EPA believes that it is appropriate to limit the evaluation of the potential impacts of subpart 4 requirements to those that would be applicable to moderate nonattainment areas. Sections 189(a) and (c) of subpart 4 apply to moderate nonattainment areas and include the following: (1) an approved permit program for construction of new and modified major stationary sources (section 189(a)(1)(A)); (2) an attainment demonstration (section 189(a)(1)(B)); (3) provisions for RACM (section 189(a)(1)(C)); and (4) quantitative milestones demonstrating RFP toward attainment by the applicable attainment date (section 189(c)).

The permit requirements of subpart 4, as contained in section 189(a)(1)(A), refer to and apply the subpart 1 permit provisions requirements of sections 172 and 173 to PM10, without adding to them. Consequently, EPA believes that section 189(a)(1)(A) does not itself impose, for redesignation purposes, any additional requirements for moderate areas beyond those contained in subpart 1.⁹ In any event, in the context of redesignation, EPA has long relied on the interpretation that a fully approved nonattainment NSR program is not considered an applicable requirement for redesignation, provided that the area can maintain the standard with a PSD program after redesignation. A detailed rationale for this view is described in the Nichols memorandum. See also rulemakings for Detroit, Michigan (60 FR 12467-12468, March 7, 1995); Cleveland-Akron-Lorain, Ohio (61 FR 20458, 20469-20470, May 7, 1996); Louisville, Kentucky (66 FR 53665, October 23, 2001); and Grand Rapids, Michigan (61 FR 31834-31837, June 21, 1996).

With respect to the specific attainment planning requirements under subpart 4,¹⁰ when EPA evaluates a redesignation request under either subpart 1 and/or subpart 4, any area that is attaining the PM2.5 standard is viewed as

⁹ The potential effect of section 189(e) on section 189(a)(1)(A) for purposes of evaluating this redesignation request is discussed below.

¹⁰ I.e., attainment demonstration, RFP, RACM, milestone requirements, and contingency measures.

having satisfied the attainment planning requirements for these subparts. For redesignations, EPA has, for many years, interpreted attainment-linked requirements as not applicable for areas attaining the standard. In the General Preamble, EPA stated that:

The requirements for RFP will not apply in evaluating a request for redesignation to attainment since, at a minimum, the air quality data for the area must show that the area has already attained. Showing that the State will make RFP towards attainment will,

`therefore, have no meaning at that point.

"General Preamble for the Interpretation of Title I of the Clean Air Act Amendments of 1990"; (57 FR 13498, 13564, April 16, 1992). The General Preamble also explained that:

[t]he section 172(c)(9) requirements are directed at ensuring RFP and attainment by the applicable date. These requirements no longer apply when an area has attained the standard and is eligible for redesignation. Furthermore, section 175A for maintenance plans . . . provides specific requirements for contingency measures that effectively supersede the requirements of section 172(c)(9) for these areas.

Id.

EPA similarly stated in its 1992 Calcagni memorandum that, "The requirements for reasonable further progress and other measures needed for attainment will not apply for redesignations because they only have meaning for areas not attaining the standard."

It is evident that, even if we were to consider the Court's January 4, 2013, decision in *NRDC v. EPA* to mean that attainment-related requirements specific to subpart 4 should be imposed retroactively¹¹ and, thus, are now past due, those requirements do not apply to an area that is attaining the 1997 PM2.5 standard, for the purpose of evaluating a pending request to redesignate the area to attainment. EPA has consistently enunciated this interpretation of applicable requirements under section 107(d)(3)(E) since the General Preamble was published more than twenty years ago. Courts have recognized the scope of EPA's authority to interpret "applicable requirements" in the redesignation context. See *Sierra Club v. EPA*, 375 F.3d 537 (7th Cir. 2004).

Moreover, even outside the context of redesignations, EPA has viewed the obligations to submit attainment-related SIP planning requirements of subpart 4 as inapplicable for areas that EPA determines are attaining the standard. EPA's prior

¹¹ As EPA has explained above, we do not believe that the Court's January 4, 2013, decision should be interpreted so as to impose these requirements on the states retroactively. *Sierra Club v. Whitman, supra*.

"Clean Data Policy" rulemakings for the PM10 NAAQS, also governed by the requirements of subpart 4, explain EPA's reasoning. They describe the effects of a determination of attainment on the attainment-related SIP planning requirements of subpart 4. See "Determination of Attainment for Coso Junction Nonattainment Area," (75 FR 27944, May 19, 2010). See also Coso Junction proposed PM10 redesignation, (75 FR 36023, 36027, June 24, 2010); Proposed and Final Determinations of Attainment for San Joaquin Nonattainment Area (71 FR 40952, 40954-55, July 19, 2006; and 71 FR 63641, 63643-47 October 30, 2006). In short, EPA in this context, has also long concluded that to require states to meet superfluous SIP planning requirements is not necessary and not required by the CAA, so long as those areas continue to attain the relevant NAAQS.

Elsewhere in this notice, EPA proposes to determine that the area has attained the 1997 PM2.5 standard. Under its longstanding interpretation, EPA is proposing to determine here that the area meets the attainment-related plan requirements of subparts 1 and 4.

Thus, EPA is proposing to conclude that the requirements to submit an attainment demonstration under 189(a)(1)(B), a RACM determination under section 172(c)(1) and section 189(a)(1)(c), a RFP demonstration under 189(c)(1), and contingency measure

requirements under section 172(c)(9) are satisfied for purposes of evaluating the redesignation request.

iii. Subpart 4 and Control of PM_{2.5} Precursors

The D.C. Circuit in *NRDC v. EPA* remanded to EPA the two rules at issue in the case with instructions to EPA to re-promulgate them consistent with the requirements of subpart 4. EPA, in this section, addresses the Court's opinion with respect to PM_{2.5} precursors. While past implementation of subpart 4 for PM₁₀ has allowed for control of PM₁₀ precursors, such as NO_x from major stationary, mobile, and area sources, in order to attain the standard as expeditiously as practicable, CAA section 189(e) specifically provides that control requirements for major stationary sources of direct PM₁₀ shall also apply to PM₁₀ precursors from those sources, except where EPA determines that major stationary sources of such precursors "do not contribute significantly to PM₁₀ levels which exceed the standard in the area."

EPA's 1997 PM_{2.5} implementation rule, remanded by the D.C. Circuit, contained rebuttable presumptions concerning certain PM_{2.5} precursors applicable to attainment plans and control measures related to those plans. Specifically, in 40 CFR 51.1002, EPA provided, among other things, that a state was "not required to address VOC [and ammonia] as . . . PM_{2.5} attainment plan precursor[s] and to evaluate sources of VOC [and ammonia]

emissions in the State for control measures." EPA intended these to be rebuttable presumptions. EPA established these presumptions at the time because of uncertainties regarding the emission inventories for these pollutants and the effectiveness of specific control measures in various regions of the country in reducing PM_{2.5} concentrations. EPA also left open the possibility for such regulation of VOC and ammonia in specific areas where that was necessary.

The Court, in its January 4, 2013, decision, made reference to both section 189(e) and 40 CFR 51.1002, and stated that, "In light of our disposition, we need not address the petitioners' challenge to the presumptions in [40 CFR 51.1002] that volatile organic compounds and ammonia are not PM_{2.5} precursors, as subpart 4 expressly governs precursor presumptions." *NRDC v. EPA*, at 27, n.10.

Elsewhere in the Court's opinion, however, the Court observed:

Ammonia is a precursor to fine particulate matter, making it a precursor to both PM_{2.5} and PM₁₀. For a PM₁₀ nonattainment area governed by subpart 4, a precursor is presumptively regulated. See 42 U.S.C. § 7513a(e) [section 189(e)].

Id. at 21, n.7. For a number of reasons, EPA believes that its proposed redesignation of the Chicago area is

consistent with the Court's decision on this aspect of subpart 4. First, while the Court, citing section 189(e), stated that "for a PM₁₀ area governed by subpart 4, a precursor is 'presumptively regulated,'" the Court expressly declined to decide the specific challenge to EPA's 1997 PM_{2.5} implementation rule provisions regarding ammonia and VOC as precursors. The Court had no occasion to reach whether and how it was substantively necessary to regulate any specific precursor in a particular PM_{2.5} nonattainment area, and did not address what might be necessary for purposes of acting upon a redesignation request.

However, even if EPA takes the view that the requirements of subpart 4 were deemed applicable at the time the state submitted the redesignation request, and disregards the implementation rule's rebuttable presumptions regarding ammonia and VOC as PM_{2.5} precursors, the regulatory consequence would be to consider the need for regulation of all precursors from any sources in the area to demonstrate attainment and to apply the section 189(e) provisions to major stationary sources of precursors. In the case of the Chicago area, EPA believes that doing so is consistent with proposing redesignation of the area for the 1997 PM_{2.5} standard. The Chicago area has attained the

1997 PM2.5 standard without any specific additional controls of VOC and ammonia emissions from any sources in the area.

Precursors in subpart 4 are specifically regulated under the provisions of section 189(e), which requires, with important exceptions, control requirements for major stationary sources of PM10 precursors.¹² Under subpart 1 and EPA's prior implementation rule, all major stationary sources of PM2.5 precursors were subject to regulation, with the exception of major stationary sources of ammonia and VOC. Thus, we must address here whether additional controls of ammonia and VOC from major stationary sources are required under section 189(e) of subpart 4 in order to redesignate the area for the 1997 PM2.5 standard. As explained below, we do not believe that any additional controls of ammonia and VOC are required in the context of this redesignation.

In the General Preamble, EPA discusses its approach to implementing section 189(e). See 57 FR 13538-13542. With regard to precursor regulation under section 189(e), the General Preamble explicitly stated that control of VOC under other CAA requirements may suffice to relieve a state from the need to adopt precursor controls under section 189(e). 57 FR 13542.

¹² Under either subpart 1 or subpart 4, for purposes of demonstrating attainment as expeditiously as practicable, a state is required to evaluate all economically and technologically feasible control measures for direct PM emissions and precursor emissions, and adopt those measures that are deemed reasonably available.

EPA, in this proposal, proposes to determine that the SIP has met the provisions of section 189(e) with respect to ammonia and VOC as precursors. This proposed supplemental determination is based on our findings that: (1) the Chicago area contains no major stationary sources of ammonia; and (2) existing major stationary sources of VOC are adequately controlled under other provisions of the CAA regulating the ozone NAAQS.¹³ In the alternative, EPA proposes to determine that, under the express exception provisions of section 189(e), and in the context of the redesignation of the area, which is attaining the 1997 annual PM_{2.5} standard, at present ammonia and VOC precursors from major stationary sources do not contribute significantly to levels exceeding the 1997 PM_{2.5} standard in this area. See 57 FR 13539-13542.

EPA notes that its 1997 PM_{2.5} Implementation Rule provisions in 40 CFR 51.1002 were not directed at evaluation of PM_{2.5} precursors in the context of redesignation, but at SIP plans and control measures required to bring a nonattainment area into attainment of the 1997 PM_{2.5} NAAQS. By contrast, redesignation to attainment primarily requires the area to have already attained due to permanent and enforceable emission reductions, and to demonstrate that controls in place can

¹³ The Chicago area has reduced VOC emissions through the implementation of various control programs including VOC RACT regulations and various on-road and non-road motor vehicle control programs.

continue to maintain the standard. Thus, even if we regard the Court's January 4, 2013, decision as calling for "presumptive regulation" of ammonia and VOC for the control of PM_{2.5} under the attainment planning provisions of subpart 4, those provisions in and of themselves do not require additional controls of these precursors for an area that already qualifies for redesignation. Nor does EPA believe that requiring Illinois to address precursors differently than they have already would result in a substantively different outcome.

Although, as EPA has emphasized, its consideration here of precursor requirements under subpart 4 is in the context of a redesignation to attainment, EPA's existing interpretation of subpart 4 requirements with respect to precursors in attainment plans for PM₁₀ contemplates that states may develop attainment plans that regulate only those precursors that are necessary for purposes of attainment in the area in question, i.e., states may determine that only certain precursors need be regulated for attainment and control purposes.¹⁴ Courts have upheld this approach to the requirements of subpart 4 for PM₁₀.¹⁵ EPA

¹⁴ See, e.g., "Approval and Promulgation of Implementation Plans for California - San Joaquin Valley PM-10 Nonattainment Area; Serious Area Plan for Nonattainment of the 24-Hour and Annual PM-10 Standards," 69 FR 30006 (May 26, 2004) (approving a PM₁₀ attainment plan that imposed controls on direct PM₁₀ and NO_x emissions and did not impose controls on SO₂, VOC, or ammonia emissions).

¹⁵ See, e.g., *Assoc. of Irrigated Residents v. EPA et al.*, 423 F.3d 989 (9th Cir. 2005).

believes that application of this approach to PM2.5 precursors under subpart 4 is reasonable. Because the Chicago area has already attained the 1997 PM2.5 NAAQS with its current approach to regulation of PM2.5 precursors, EPA believes that it is reasonable to conclude, in the context of this redesignation, that there is no need to revisit the attainment control strategy with respect to the treatment of precursors. Even if the Court's decision is construed to impose an obligation, in evaluating this redesignation request, to consider additional precursors under subpart 4, it would not affect EPA's approval here of Illinois' request for redesignation of the Chicago area. In the context of a redesignation, the area has shown that it has attained the standard. Moreover, the state has shown and EPA has proposed to determine that attainment in this area is due to permanent and enforceable emissions reductions on all precursors necessary to provide for continued attainment. It follows logically that no further control of additional precursors is necessary. Accordingly, EPA does not view the January 4, 2013, decision of the Court as precluding redesignation of the Chicago area to attainment for the 1997 PM2.5 NAAQS at this time.

In sum, even if Illinois were required to address precursors for the Chicago area under subpart 4 rather than under subpart 1, as interpreted in EPA's remanded 1997 PM2.5

Implementation Rule, EPA would still conclude that the area had met all applicable requirements for purposes of redesignation in accordance with section 107(d)(3)(E)(ii) and (v).

C. Are the Air Quality Improvements in the Chicago-Gary-Lake County, IL-IN Area Due to Permanent and Enforceable Emission Reductions?

Section 107(d)(3)(E)(iii) of the CAA requires the state to demonstrate that the improvement in air quality is due to permanent and enforceable emission reductions. EPA finds that Illinois has demonstrated that the observed PM_{2.5} air quality improvement in the Chicago-Gary-Lake County, IL-IN area is due to permanent and enforceable emission reductions. In making this demonstration, Illinois first determined and documented the change in primary PM_{2.5}, NO_x, and SO₂ emissions in the Chicago-Gary-Lake County, IL-IN area between 2002 (a standard-violation year) and 2008 (an attainment year). Illinois demonstrated that the reduction in emissions and the corresponding improvement in air quality over the intervening period (2002 - 2008) can be attributed to a number of regulatory control measures that have been implemented in the Chicago-Gary-Lake County, IL-IN area and in surrounding contributing areas in the recent years.

1. Permanent and Enforceable Controls

The following is a discussion of the permanent and enforceable measures that have been implemented in the Chicago area and in upwind areas.

a. Federal Emission Control Measures

Reductions in PM_{2.5} precursor emissions have occurred statewide in Illinois and in upwind areas as a result of the following Federal emission control measures, with additional emission reductions expected in the future. Federal emission control measures include the following.

i. Tier 2 Emission Standards for Vehicles and Gasoline Sulfur Standards.

40 CFR part 86, subpart S. These emission control requirements result in lower VOC, NO_x, and SO₂ emissions from new cars and light duty trucks, including sport utility vehicles. The Federal rules were phased in between 2004 and 2009. The EPA has estimated that, by the end of the phase-in period, the following vehicle NO_x emission reductions will occur nationwide: passenger cars (light duty vehicles), 77 percent; light duty trucks, minivans, and sports utility vehicles, 86 percent; and, larger sports utility vehicles, vans, and heavier trucks, 69 to 95 percent. VOC emission reductions will be approximately 12 percent for passenger cars, 18 percent for smaller sports utility vehicles, light trucks, and minivans, and 15 percent for larger sports utility vans, and heavier trucks. Some of the

emission reductions resulting from new vehicle standards occurred during the 2008-2010 attainment period; however, additional emission reductions will continue to occur throughout the maintenance period as new vehicles replace older vehicles. The Tier 2 standards also reduced the sulfur content of gasoline to 30 parts per million (ppm) beginning in January 2006.

ii. Heavy-Duty Diesel Engine Rule

EPA issued this rule on January 18, 2001 (66 FR 5002). This rule went into effect in 2004 and includes standards limiting the sulfur content of diesel fuel. A second phase took effect in 2007 and resulted in reduced PM_{2.5} emissions from heavy-duty highway diesel engines and further reduced the highway diesel fuel sulfur content to 15 ppm. The full implementation of this rule is estimated to achieve a 90 percent reduction in direct PM_{2.5} emissions (including direct emissions of sulfates) and a 95 percent reduction of NO_x emissions for new engines using low sulfur diesel fuel, compared to existing engines using higher sulfur content fuel. The reductions in fuel sulfur content occurred by the 2008-2010 attainment period. Some of the emissions reductions resulting from new vehicle standards also occurred during the 2008-2010 attainment period; however, additional emission reductions will continue to occur throughout the maintenance period as the fleet of older heavy-duty diesel engines turns over. This rule will also lower SO₂

emissions from engines using the low sulfur diesel fuel, resulting in lower PM2.5 concentrations; however, EPA has not estimated the level of this emission reduction and the level of its impact on PM2.5 concentrations.

iii. Non-road Diesel Engine Standards

On June 29, 2004 (69 FR 38958), EPA promulgated a rule to establish emission standards for large non-road diesel engines, such as those used in construction, agriculture, or mining operations, and to regulate the sulfur content in non-road diesel fuel. The engine emission standards in this rule are to be phased in between 2008 and 2014. This rule reduced the allowable sulfur content in non-road diesel fuel by over 99 percent. Prior to 2006, non-road diesel fuel averaged approximately 3,400 ppm in sulfur content. This rule limited non-road diesel fuel content to 500 ppm starting in 2007, with a further reduction to 15 ppm starting in 2010. The combined engine standards and fuel sulfur content limits reduce NOx and PM2.5 emissions (including direct emissions of sulfates) from large non-road diesel engines by over 90 percent compared to pre-control non-road engines using the higher sulfur content fuel. This rule achieved all of the reductions in fuel sulfur content by 2010. Some emission reductions from the new engine emission standards were realized over the 2008-2010 period; although most of the engine emission reductions will occur

during the maintenance period as the fleet of non-road diesel engines turns over.

iv. Non-road Spark-Ignition Engines and Recreational Engine Standards

On November 8, 2002 (67 FR 68243), EPA promulgated emission standards for groups of previously unregulated non-road engines. These engines include large spark-ignition engines, such as those used in forklifts and airport ground-service equipment; recreational vehicles using spark-ignition engines, such as off-highway motorcycles, all-terrain vehicles, and snowmobiles; and, recreational marine diesel engines. Emission standards for large spark-ignition engines were implemented in two tiers, with Tier I starting in 2004 and Tier 2 starting in 2007. Recreational vehicle emission standards were phased in from 2004 through 2012. Marine diesel engine standards were phased in from 2006 through 2009.

With full implementation of all of the non-road spark-ignition engine and recreational engine standards, an overall 72 percent reduction in VOC, 80 percent reduction in NO_x, and 56 percent reduction in carbon monoxide (CO) emissions are expected by 2020. Some of these emission reductions occurred by the 2008-2010 attainment period, and additional emission reductions will occur during the maintenance period as the fleets turn over.

b. Control Measures Statewide in Illinois and in Upwind Areas

Due to the significance of sulfates and nitrates as components of PM_{2.5} in the Chicago-Gary-Lake County, IL-IN area, the PM_{2.5} air quality in this area is strongly affected by regulation of SO₂ and NO_x emissions from power plants in areas upwind of the Chicago-Gary-Lake County, IL-IN area. The emission control regulations impacting the upwind area include the following.

i. NO_x SIP Call

On October 27, 1998 (63 FR 57356), EPA issued a NO_x SIP call requiring the District of Columbia and 22 states to reduce emissions of NO_x from Electric Generating Units (EGUs), large industrial boilers, and cement kilns. Affected states were required to comply with Phase I of the SIP call beginning in 2004, and with Phase II beginning in 2007. NO_x emission reductions resulting from regulations developed in response to the NO_x SIP call are permanent and enforceable. The state of Illinois and other nearby upwind states, including Michigan, Indiana, and Kentucky were subject to the NO_x SIP call.

ii. Clean Air Interstate Rule (CAIR) and Cross-State Air Pollution Rule (CSAPR)

EPA proposed CAIR on January 30, 2004, at 69 FR 4566, promulgated CAIR on May 12, 2005, at 70 FR 25162, and promulgated associated Federal Implementation Plans (FIPs) on

April 28, 2006, at 71 FR 25328, in order to reduce SO₂ and NO_x emissions and improve air quality in areas across Eastern United States. However, on July 11, 2008, the D.C. Circuit vacated and remanded both CAIR and the associated CAIR FIPs in their entirety. See *North Carolina v. EPA*, 531 F.3d 836 (D.C. Cir. 2008). EPA petitioned for a rehearing, and the D.C. Circuit issued an order remanding CAIR and the CAIR FIPs to EPA without vacatur. See *North Carolina v. EPA*, 550 F.3d 1176 (D.C. Cir. 2008). The D.C. Circuit, thereby, left CAIR in place in order to "temporarily preserve the environmental values covered by CAIR" until EPA replaced it with a rule consistent with the Court's opinion. *Id.* at 1178. The Court directed EPA to "remedy CAIR's flaws" consistent with the July 11, 2008 opinion, but declined to impose a schedule on EPA for completing this action. *Id.*

EPA promulgated CSAPR (76 FR 48208, August 8, 2011) to replace CAIR. See 76 FR 59517. As noted above, CAIR requires significant reductions in emissions of SO₂ and NO_x from electric generating units to limit the interstate transport of these pollutants and the ozone and fine particulate matter they form in the atmosphere. See 76 FR 70093.

On August 21, 2012, the D.C. Circuit issued a decision to vacate CSAPR. In that decision, it also ordered EPA to continue administering CAIR "pending the promulgation of a valid

replacement." *EME Homer City*, 696 F.3d at 38. The D.C. Circuit denied all petitions for rehearing on January 24, 2013. EPA and other parties have filed petitions for certiorari to the U.S. Supreme Court. On June 24, 2013, the U.S. Supreme Court granted the petitions for certiorari. Nonetheless, EPA intends to continue to act in accordance with the *EME Homer City* opinion until the U.S. Supreme Court issues its decision.

In light of these unique circumstances and for the reasons explained below, to the extent that attainment is due to emission reductions associated with CAIR, EPA is here proposing to determine that these emission reductions are sufficiently permanent and enforceable for purposes of CAA section 107(d)(3)(E)(iii) (and for purposes of assessing maintenance of the 1997 annual PM_{2.5} standard in the Chicago-Gary-Lake County, IL-IN area, as discussed below, for CAA section 175A).

c. Consent Decrees

Two petroleum refineries, the CITGO and Exxon Mobil refineries, have units subject to Best Available Retrofit Technology (BART) requirements for purposes of achieving reduced haze levels: the CITGO refinery in Lemont, Illinois and the Exxon Mobil refinery south of Joliet, Illinois. Both refineries will be required to reduce emissions by a Federal consent decree resolving an enforcement action brought by EPA against a number of refineries. The consent decrees require the

CITGO and Exxon Mobil refineries (and other refineries in Illinois) to operate controls at the Best Available Control Technology (BACT) level. Illinois evaluated the subject-to-BART units at the CITGO and Exxon Mobil refineries in the consent decree. It found that the NOx and SO₂ emission limits for these units satisfy BART.

A consent decree between the United States and CITGO Petroleum Corporation was entered in the U.S. District Court for the Southern District of Texas on October 6, 2004 (No. H-04-3883). The consent decree requires the company to operate Selective Catalytic Reduction (SCR) and a wet scrubbing system at its Fluid Catalytic Cracking Unit (FCCU) that will reduce NOx emissions by more than 90 percent and SO₂ emissions by 85 percent. The controls on the FCCU are expected to result in a reduction of NOx emissions from 1,065.7 to 106.6 TPY and SO₂ emissions from 10,982.5 to 107.9 TPY by 2013. CITGO has also added a tail gas recovery unit that reduces SO₂ emissions from its sulfur train units from 4340.0 to 91.2 TPY, a 98 percent reduction. The emission controls on all units at CITGO's Lemont refinery will reduce NOx emissions by 1,268 TPY and SO₂ emissions by 15,123 TPY.

A consent decree between the United States and Exxon Mobil Corporation was entered in the U.S. District Court for the Northern District of Illinois on October 11, 2005 (No. 05-C-

5809). The consent decree for Exxon Mobil requires SCR operation on its FCCU in addition to maintenance of the existing wet scrubbing system. The controls on the FCCU result in a 1,636.2 TPY decrease in NO_x emissions from 1,818.0 to 181.8 TPY and a 9,667.7 TPY decrease in SO₂ emissions from 9,865.0 to 197.3 TPY. Exxon Mobil has also added a tail gas recovery unit on its south sulfur recovery unit. That unit reduces SO₂ emissions by 9,153.8 TPY to 186.8 TPY. The emission controls at Exxon Mobil's Joliet refinery will reduce NO_x emissions by 1,695 TPY and SO₂ emissions by 18,821 TPY.

These two consent decrees are Federally enforceable and also require that the refineries submit permit applications to Illinois to incorporate the required emission limits into Federally enforceable air permits (other than Title V). Therefore, emission limits established by the consent decrees may be relied upon by Illinois for addressing the BART requirement for these facilities and for crediting toward the reduction of PM_{2.5} levels in the Chicago area and maintenance of the 1997 annual PM_{2.5} standard in the Chicago-Gary-Lake County, IL-IN area.

2. Emission Reductions

a. Illinois' Demonstration That Significant Emission

Reductions Have Occurred in the Chicago-Gary-Lake County, IL-IN Area and In Upwind Areas

To demonstrate that significant emission reductions have resulted in attainment, Illinois compared the Chicago area NO_x, SO₂, and primary PM_{2.5} emissions for 2002 with those of 2008. As noted above, the 2008 emissions represent those for a year in which the Chicago-Gary-Lake County, IL-IN area was attaining the 1997 annual PM_{2.5} standard (2008 is the middle year of the 2007-2009 period in which the Chicago-Gary-Lake County, IL-IN area initially attained the 1997 annual PM_{2.5} standard), and 2002 represents a year in which the Chicago-Gary-Lake County, IL-IN area was violating this standard.

The derivation of the 2002 (base year) emissions is discussed in more detail below in section V.F. The derivation of the 2008 (attainment year) emissions is discussed in more detail here.

The 2008 emissions were based on actual source activity levels. The point source emissions were compiled from Illinois' 2008 Annual Emissions Reports (AERs) submitted to the IEPA by individual source facilities. Area source emissions were calculated using the most recently available emission calculation methodologies, emission factors developed by EPA, and activity data (population, employment, fuel use, etc.) specific to 2008. On-road mobile source emissions were calculated using EPA's MOVES emissions model with 2008 Vehicle Miles Traveled (VMT) data provided by the Illinois Department of

Transportation (IDOT). Off-road mobile source emissions were calculated using either EPA's NONROAD emission model (for all non-road sources except commercial marine vessels, locomotives, and aircraft) or information supplied by contractors (for marine vessels, locomotives, and aircraft). Biogenic emissions were not included in the emission inventories since these emissions are assumed to remain constant over time (biogenic emissions are not included in the 2002, 2008, 2015, and 2025 emissions summarized in this proposed rule).

The 2002 and 2008 Chicago area emissions (covering only the Illinois portion of the Chicago-Gary-Lake County, IL-IN area) are summarized in tables 3 through 5 below. All emissions are in units of TPY. All summarized emissions are documented in Illinois' August 17, 2011 "Maintenance Plan for the Chicago Nonattainment Area for the 1997 PM_{2.5} National Ambient Air Quality Standards (Revised)."

Table 3. Comparison of 2002 and 2008 NOx Emission Totals for the Chicago Area By Source Sector (TPY)

Source Sector	2002	2008	Net Change 2002-2008
Point Sources	54,050	35,939	-18,111
Area Sources	32,325	32,318	-7
On-Road Mobile Sources	187,632	127,951	-59,681
Off-Road Mobile Sources	87,426	51,184	-36,242
Total	361,433	247,391	-114,042

Table 4. Comparison of 2002 and 2008 Primary PM_{2.5} Emission Totals for the Chicago Area by Source Sector (TPY)

Source Sector	2002	2008	Net Change 2002-2008
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Point Sources	2,757	3,859	1,102
Area Sources	22,356	9,189	-13,167
On-Road Mobile Sources	6,573	5,100	-1,473
Off-Road Mobile Sources	4,834	3,653	-1,181
Total	36,520	21,800	-14,720

Table 5. Comparison of 2002 and 2008 SO₂ Emission Totals for the Chicago Area by Source Sector (TPY)

Source Sector	2002	2008	Net Change 2002-2008
Point Sources	121,598	90,706	-30,892
Area Sources	3,290	4,109	819
On-Road Mobile Sources	4,472	537	-3,935
Off-Road Mobile Sources	3,743	779	-2964
Total	133,103	96,130	-36,973

Tables 3 through 5 show that NO_x, SO₂, and primary PM_{2.5} emissions in the Chicago area have decreased significantly between 2002 and 2008.

In addition to the local PM_{2.5} precursor emission reductions, we believe that regional NO_x and SO₂ emission reductions resulting from the implementation of EPA's Acid Rain Program (ARP) (see 40 CFR parts 72 through 78), NO_x SIP call, and CAIR have significantly contributed to the PM_{2.5} air quality improvement in the Chicago-Gary-Lake County, IL-IN area. To assess the change in regional emissions from states believed to significantly contribute to annual PM_{2.5} concentrations in the Chicago-Gary-Lake County, IL-IN area, we have considered statewide NO_x and SO₂ emissions from EGUs reported for 2002 and 2008 in EPA's ARP/CAIR database. To limit the number of states considered, we have selected those states with emissions that

have been modeled to have significantly contributed to elevated PM_{2.5} concentrations in Cook County, Illinois (a modeling receptor site considered to be representative of the regional transport into the Chicago-Gary-Lake County, IL-IN area. Table 6 summarizes statewide NO_x and SO₂ emissions for EGUs previously summarized in the proposed rule for the redesignation of Lake and Porter Counties, Indiana to attainment of the 1997 annual PM_{2.5} standard. See 76 FR 59600, 59608-59609, September 27, 2011.

Table 6. Statewide EGU Emissions for 2002 and 2008 (TPY)

State	NO _x			SO ₂		
	2002	2008	Percent Reduction	2002	2008	Percent Reduction
Illinois	174,246	119,930	31.2	353,699	257,357	27.2
Indiana	281,146	190,092	32.4	778,868	565,459	27.4
Iowa	78,956	49,023	37.9	127,847	109,293	14.5
Kentucky	198,598	157,903	21.4	482,653	344,356	28.7
Michigan	132,623	107,623	18.9	342,998	326,500	4.8
Minnesota	86,663	60,230	30.5	101,285	71,926	29.0
Ohio	370,497	235,049	36.6	1,132,069	709,914	37.3
Pennsylvania	200,909	183,658	8.6	889,765	831,914	6.5
Wisconsin	88,970	47,794	46.3	181,256	129,693	32.1
Total	1,612,708	1,151,302	28.6	4,400,440	3,346,412	24.0

As can be seen in table 6, the implementation of CAIR resulted in significant reductions in regional, statewide NO_x and SO₂ emissions from EGUs in the states EPA finds are contributing significantly to the annual PM_{2.5} concentrations in the Chicago-Gary-Lake County, IL-IN area. Since CAIR remains in place until EPA can replace it with an acceptable new region-wide emissions control rule, we believe these emission reductions to be permanent and enforceable.

Based on the information summarized above, primary PM_{2.5} and precursor PM_{2.5} emissions (SO₂ and NO_x) have significantly decreased between 2002 and 2008 in the Chicago area and in states with EGU emissions significantly impacting the annual PM_{2.5} concentrations in the Chicago area.

b. VOC and Ammonia Emission Reductions

For several reasons, we believe that VOC emission reductions in the Chicago area and in upwind states have also contributed to the observed improvement in annual PM_{2.5} concentrations in the Chicago area and in the Chicago-Gary-Lake County, IL-IN area as a whole. In addition, for several reasons, we also believe that changes in ammonia emissions have not significantly impacted the observed annual PM_{2.5} concentrations in these areas.

First, as noted elsewhere in this proposed rule in EPA's discussion of section 189(e) of the CAA, VOC emissions in the Chicago area have historically been well-controlled under SIP requirements related to ozone and other pollutants.¹⁶ Second, total ammonia emissions throughout the Chicago area are very low, estimated to be 9,885.71 TPY in 2002. See table 12 below.

¹⁶ For a thorough discussion of VOC emission controls and estimates (2002 and 2008) and projected (2015, 2020, and 2025) VOC emission levels (summertime emissions) in the Chicago area, see EPA's proposed rule for the redesignation of the Chicago area to attainment of the 1997 8-hour ozone standard (77 FR 6743, February 9, 2012). We observe here that the estimated/projected summertime VOC emission reductions in the Chicago area also generally reflect reductions in annual emissions of VOC in this area.

This amount of ammonia emissions appears especially small in comparison to the total amounts of SO₂, NO_x, and even direct PM_{2.5} emissions in the area in 2002. Third, as described below, available information shows that no PM_{2.5} precursor, including VOC and ammonia, is expected to increase over the maintenance period so as to interfere with or undermine the state's maintenance demonstration.

c. Conclusions Regarding Emission Reductions Between 2002 and 2005 In the Chicago Area

In summary, emissions data provided by the state support the conclusion that significant reductions in the emissions of SO₂, NO_x, primary PM_{2.5}, and VOC occurred in the Chicago area between 2002 and 2008. During the same period, emissions of ammonia are believed to have had minimal impact on PM_{2.5} concentrations in the Chicago area. We believe that the emission reductions of the significant PM_{2.5} precursors and primary PM_{2.5} in the Chicago area and in upwind states are responsible for the observed improvement in annual PM_{2.5} concentrations in the Chicago-Gary-Lake County, IL-IN area. For the reasons set forth above, we conclude that the attainment of the 1997 annual PM_{2.5} standard in the Chicago area can be explained on the basis of permanent and enforceable emission reductions within the Chicago area and in the states regulated by CAIR.

D. Does Illinois Have a Fully Approvable PM2.5 Maintenance Plan Pursuant to Section 175A of the CAA for the Chicago Area?

In conjunction with Illinois' request to redesignate the Chicago area to attainment of the 1997 annual PM2.5 standard, IEPA submitted a SIP revision to provide for maintenance of the 1997 annual PM2.5 standard in the Chicago-Gary-Lake County, IL-IN area through 2025. This maintenance plan demonstrates that emissions in the Chicago area will remain at or below the attainment levels throughout the maintenance period and provides for corrective action should the 1997 annual standard be violated or threatened in the Chicago-Gary-Lake County, IL-IN area during the maintenance period. The following summarizes the details of the maintenance plan and maintenance demonstration.

1. What Is Required in a Maintenance Plan?

Sections 107(d)(3)(E)(iv) and 175A of the CAA require that states demonstrate that the areas to be redesignated will continue to meet the PM2.5 NAAQS for at least 10 years after EPA approves the redesignations of the areas to attainment of the NAAQS. Section 175A of the CAA sets forth the required elements of a maintenance plan. Under section 175A, a state must also commit to submit a revised maintenance plan within eight years of redesignation to provide for maintenance of the standard for

an additional 10 years after the initial 10-year maintenance period. To address the possibility of future NAAQS violations, the maintenance plan must contain contingency measures with a schedule for implementation, as EPA deems necessary, to assure prompt correction of any future violations of the standard.

The September 4, 1992, Calcagni memorandum provides additional guidance on the content of a maintenance plan. The memorandum states that a maintenance plan should address the following items: (1) the attainment emission inventories; (2) a maintenance demonstration showing maintenance of the standard for the 10 years of the maintenance period; (3) a commitment to maintain the existing monitoring network; (4) the factors and procedures to be used for verification of continued attainment of the standard; and (5) a contingency plan to prevent or correct future violations of the standard.

2. Attainment Inventory

As noted above, IEPA developed NO_x, SO₂, and primary PM_{2.5} emission inventories for 2008, one of the years used to demonstrate monitored attainment of the 1997 annual PM_{2.5} standard. The 2008 emissions are summarized in tables 3 through 5 above.

3. Demonstration of Maintenance

Along with the redesignation request, IEPA submitted a maintenance plan dated August 17, 2011, which includes a

demonstration of maintenance for the Chicago area, as required by section 175A of the CAA. This demonstration shows maintenance of the 1997 annual PM_{2.5} standard through 2025 by showing that current and future emissions of NO_x, SO₂, and primary PM_{2.5} emissions for the Chicago area will remain at or below attainment year emission levels. A maintenance demonstration may be based on such an emissions inventory approach. See *Wall v. EPA*, 265 F.3d 426 (6th Cir. 2001), *Sierra Club v. EPA*, 375 F.3d 537 (7th Cir. 2004). See also 66 FR 53094, 53099-53100 (October 19, 2001), 68 FR 25413, 25430-25432 (May 12, 2003).

Illinois used emission projections for 2015, 2020, and 2025 to demonstrate maintenance. For each of the applicable PM_{2.5} precursors (pollutants), IEPA prepared emission estimates for the same source sectors used by IEPA for the 2008 attainment year. IEPA assumed biogenic emissions to remain constant, and did not consider them in the maintenance demonstration analysis.

IEPA used EPA's MOVES mobile source model and projected traffic levels and other related mobile source factors to estimate on-road mobile source emissions for the maintenance demonstration years. The projected on-road mobile source emissions assume the continued use of reformulated gasoline, the continued phase-in of the Tier 2 motor vehicle emission standards, and the operation of an enhanced vehicle inspection

and maintenance program in the Chicago area. Total VMT for 2015, 2020, and 2025 were derived by assuming that the VMT will increase at a rate of 1.5 percent per year after 2008. The 2008 and 2025 on-road mobile source emissions were used to establish MVEBs for the Chicago area. See the additional discussion of the MVEBs in section V.E of this proposed rule.

Chicago area point and area source emissions for 2015, 2020, and 2025 were estimated using the 2008 attainment year emissions and growth factors appropriate for each source category. Off-road emission projections were developed using the growth factors contained in EPA's NONROAD model.

Tables 7 through 9 summarize the projected NO_x, SO₂, and primary PM_{2.5} emissions for 2008, 2015, 2020, and 2025 by source sector.

Table 7. Comparison of 2008, 2015, 2020, and 2025 NO_x Emissions By Source Sector (TPY) For the Chicago Area

Source Sector	2008	2015	2020	2025	Net Change 2008-2025
Point Sources	35,939	27,082	28,500	29,638	-6,301
Area Sources	32,318	32,997	33,277	33,687	1,369
On-Road Mobile	127,951	68,491	40,599	38,456	-89,495
Off-Road Mobile	51,184	35,927	28,271	27,173	-24,011
Totals	247,391	164,497	130,648	128,954	-118,437

Table 8. Comparison of 2008, 2015, 2020, and 2025 SO₂ Emissions By Source Sector (TPY) For the Chicago Area

Source Sector	2008	2015	2020	2025	Net Change 2008-2025
Point Sources	90,706	58,092	53,452	56,310	-34,396
Area Sources	4,109	4,266	4,332	4,407	298
On-Road Mobile	537	504	477	488	-49
Off-Road Mobile	779	866	919	1,215	436
Totals	96,130	63,727	59,180	62,420	-33,710

Table 9. Comparison of 2008, 2015, 2020, and 2025 Primary PM2.5 Emissions By Source Sector (TPY) For the Chicago Area

Source Sector	2008	2015	2020	2025	Net Change 2008-2025
Point Sources	3,859	4,169	4,391	4,604	745
Area Sources	9,189	9,676	10,009	10,377	1,188
On-Road Mobile	5,100	3,071	2,119	2,067	-3,033
Off-Road Mobile	3,653	2,995	2,398	2,267	-1,386
Totals	21,800	19,911	18,918	19,316	-2,484

Comparison of the 2008 and projected 2015, 2020, and 2025 emissions demonstrates that future NO_x, SO₂, and primary PM2.5 emissions through 2025 will remain below the 2008 levels in the Chicago area.

In a September 27, 2011 proposed rulemaking (76 FR 59600, 59610) for the redesignation of Lake and Porter Counties, Indiana (the Indiana portion of the Chicago-Gary-Lake County, IL-IN area) to attainment of the 1997 annual PM2.5 standard, we also evaluated the 2008, 2015, 2020, and 2025 emissions for the entire Chicago-Gary-Lake County, IL-IN area. Table 10 repeats the summary of the area's emission totals as documented in the September 27, 2011 proposed rule.

Table 10. Chicago-Gary-Lake County, IL-IN Area 2008 and Projected Emission Totals (TPY)

Year	NO _x	SO ₂	Primary PM2.5
2008	278,649.74	152,367.68	32,069.68
2015	187,557.31	107,285.55	25,128.65
2020	156,231.26	98,829.89	24,729.26
2025	149,198.79	99,453.24	25,074.10

Tables 7 through 10 show that emissions will remain at or below 2008 emission levels in the Chicago area and in the

Chicago-Gary-Lake County, IL-IN area through 2025. Therefore, the state has demonstrated maintenance of the 1997 annual PM2.5 standard for a period extending ten years and beyond from the time EPA may be expected to complete rulemaking on the state's PM2.5 redesignation request.

4. Monitoring Network

Illinois commits to continue monitoring PM2.5 levels according to the EPA-approved monitoring plan, as required to ensure maintenance of the 1997 annual PM2.5 standard. If changes are needed in the PM2.5 monitoring network, the IEPA will work with the EPA to ensure the adequacy of the monitoring network.

5. Verification of Continued Attainment

Continued attainment of the 1997 annual PM2.5 standard in the Chicago area and in the Chicago-Gary-Lake County, IL-IN area depends, in part, on the state's efforts toward tracking indicators of continued attainment during the maintenance period. Illinois' plan for verifying continued attainment of the standard in these areas consists of continued ambient PM2.5 monitoring in accordance with the requirements of 40 CFR part 58 and continued tracking of emissions through periodic updates of PM2.5, SO2 and NOx emissions inventories for the Chicago area, as required by the Federal Consolidated Emission Reporting Rule (codified at 40 CFR 51 subpart A).

6. Contingency Plan

Section 175A of the CAA requires that a maintenance plan include such contingency measures as EPA deems necessary to ensure that the state will promptly correct a violation of the NAAQS that might occur after redesignation. The maintenance plan should identify the contingency measures to be adopted, a schedule and procedure for adoption and implementation of the contingency measures, and a time limit for action by the state. The state should also identify specific indicators to be used to determine when the contingency measures need to be adopted and implemented. The maintenance plan must include a requirement that the state will implement all measures with respect to control of the pollutant(s) that were controlled through the SIP before redesignation of the area to attainment. See section 175A(d) of the CAA.

As required by section 175A of the CAA, Illinois has adopted a contingency plan for the Chicago area to address possible future violations of the 1997 annual PM_{2.5} standard. The contingency plan provides for two levels of action. A Level I response would be triggered whenever: (1) the highest monitored PM_{2.5} concentration in any year at any monitoring station in the Chicago maintenance area exceeds 15 µg/m³; or (2) the Chicago maintenance area's total PM_{2.5}, SO₂ or NO_x emissions increase more than 5 percent above the 2008 emissions. A Level I

trigger will result in an evaluation of current PM_{2.5} air quality and/or emission trends to determine if adverse emission trends are likely to continue. If so, Illinois will determine what and where controls may be required, as well as level of emissions reductions needed, to avoid a violation of the NAAQS. The study will be completed within 9 months. If necessary, control measures will be adopted within 18 months of determination of the Level I triggering and implemented as expeditiously as practicable, taking into consideration the ease of implementation and the technical and economic feasibility of the selected measures.

A Level II response will be triggered if a violation of the 1997 annual PM_{2.5} standard occurs at any monitoring station in the Chicago maintenance area. If triggered, Illinois will conduct an analysis to determine appropriate measures to address the cause of the violation. Analysis will be completed within six months. Selected control measures will be implemented within 18 months of the violation. Potential control measures contained in Illinois' contingency plan include the following:

- Illinois' Multi-Pollutant Program for EGUs
- NO_x RACT
- Best Available Retrofit Technology (BART)

- Broader geographic applicability of existing control measures
- Tier 2 vehicle standards and low sulfur fuel standard
- Heavy duty diesel standards and low sulfur diesel fuel standard
- High-enhanced vehicle inspection/maintenance (On-board Diagnostics II (OBDII))
- Federal railroad/locomotive standards
- Federal commercial marine vessel engine standards
- Architectural/Industrial Maintenance (AIM) coatings
- Commercial and consumer products rules
- Aerosol coating rules, and
- Portable fuel container rules.

Note that some of these rules are Federal rules and are already being implemented. If a future violation of the 1997 annual PM2.5 occurs, IEPA will analyze the future emission reduction potential from these rules to determine if these future emission reductions will be sufficient to mitigate the PM2.5 air quality problem.

EPA believes that Illinois' contingency plan satisfies the pertinent requirements of section 175A of the CAA.

7. Provision for Future Update of the Annual PM2.5 Maintenance Plan

As required by section 175A(b) of the CAA, Illinois commits to submit to EPA an updated maintenance plan eight years after EPA redesignates the Chicago area to attainment of the 1997 annual standard. The revised maintenance plan is intended to cover an additional 10-year period beyond the initial 10-year maintenance period. As required by section 175A of the CAA, Illinois has also committed to retain and implement the emission control measures contained in the maintenance plan. If changes are needed in the control measures, Illinois commits to submit these changes to EPA as requested SIP revisions and to demonstrate that these emission control measure revisions will not interfere with the maintenance of the 1997 annual PM_{2.5} standard in the Chicago-Gary-Lake County, IL-IN area.

Finally, the state affirms that Illinois has the legal authority to implement and enforce the requirements of the maintenance plan pursuant to the Illinois Environmental Protection Act.

8. CAIR and CSAPR

a. Background - Effect of the August 21, 2012, D.C. Circuit Decision Regarding EPA's CSAPR

EPA recently promulgated CSAPR (76 FR 48208, August 8, 2011) to replace CAIR, which has been in place since 2005. See 76 FR 59517. CAIR requires significant reductions in emissions of SO₂ and NO_x from EGUs to limit the interstate transport of

these pollutants and the ozone and PM_{2.5} they form in the atmosphere. See 76 FR 70093. The D.C. Circuit initially vacated CAIR, *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008), but ultimately remanded that rule to EPA without vacatur to preserve the environmental benefits provided by CAIR, *North Carolina v. EPA*, 550 F.3d 1176, 1178 (D.C. Cir. 2008).

CSAPR included regulatory changes to sunset (i.e., discontinue) CAIR and CAIR FIPs for control periods in 2012 and beyond. See 76 FR 48322. Although the Chicago area redesignation request and Illinois' PM_{2.5} maintenance plan rely on emission reductions associated with CAIR, EPA is proposing to approve the redesignation request and PM_{2.5} maintenance plan based, in part, on the fact that CAIR is to remain in place until it is replaced by an acceptable interstate transport control rule.

On December 30, 2011, the D.C. Circuit issued an order addressing the status of CSAPR and CAIR in response to motions filed by numerous parties seeking a stay of CSAPR pending judicial review. In that order, the Court stayed CSAPR pending resolution of the petitions for review of that rule in *EME Homer City* (No. 11-1302 and consolidated cases). The Court also indicated that EPA was expected to continue to administer CAIR in the interim until judicial review of CSAPR was completed.

As discussed above, on August 21, 2012, the D.C. Circuit issued the decision in *EME Homer City* to vacate and remand CSAPR and ordered EPA to continue administrating CAIR "pending . . . development of a valid replacement." *EME Homer City* at 38. The D.C. Circuit denied all petitions for rehearing on January 24, 2013. EPA and other parties have filed petitions for certiorari to the U.S. Supreme Court. On June 24, 2013, the U.S. Supreme Court granted the petitions for certiorari. Nonetheless, EPA intends to continue to act in accordance with the *EME Homer City* opinion until the U.S. Supreme Court issues its decision.

In light of these unique circumstances and for the reasons explained below, to the extent that attainment and maintenance is due to emission reductions associated with CAIR, EPA is here determining that those reductions are sufficiently permanent and enforceable for purposes of CAA sections 107(d)(3)(E)(iii) and 175A.

As directed by the D.C. Circuit, CAIR remains in place and enforceable until EPA promulgates a valid replacement rule to substitute for CAIR. As noted above, the Chicago area PM2.5 redesignation request and maintenance plan relies on the emission reductions from CAIR. Illinois adopted CAIR emission control rules in 2007 and required compliance with these rules in two phases, one with compliance required by 2009, and the final phase with compliance required by 2015. CAIR was, thus,

in place and getting emission reductions when the Chicago-Gary-Lake County, IL-IN area was monitoring attainment of the 1997 annual PM2.5 standard during the 2008-2011 period.

To the extent that Illinois is relying on CAIR in its maintenance plan to support continued attainment into the future, the recent directive from the D.C. Circuit in *EME Homer City* ensures that the emission reductions associated with CAIR will be permanent and enforceable for the necessary time period. EPA has been ordered by the Court to develop a new rule to address interstate transport to replace CSAPR and the opinion makes clear that after promulgating that new rule EPA must provide states an opportunity to draft and submit SIPs to implement that rule. Thus, CAIR will remain in place until EPA has promulgated a final rule through a notice-and-comment rulemaking process, states have had an opportunity to draft and submit SIPs in response to it, EPA has reviewed the SIPs to determine if they can be approved, and EPA has taken action on the SIPs, including promulgating FIPs if appropriate. The Court's clear instruction to EPA is that it must continue to administer CAIR until a valid replacement exists, and thus EPA believes that CAIR emission reductions may be relied upon until the necessary actions are taken by EPA and states to administer CAIR's replacement. Furthermore, the Court's instruction provides an additional backstop: by definition, any rule that

replaces CAIR and meets the Court's direction would require upwind states to have SIPs that eliminate any significant contributions to downwind nonattainment and prevent interference with maintenance in downwind areas.

Moreover, in vacating CSAPR and requiring EPA to continue administering CAIR, the D.C. Circuit emphasized that the consequences of vacating CAIR "might be more severe now in light of the reliance interests accumulated over the intervening four years." *EME Homer City*, 696 F.3d at 38. The accumulated reliance interests include the interests of states that reasonably assumed they could rely on reductions associated with CAIR which brought certain nonattainment areas into attainment with the NAAQS. If EPA were prevented from relying on reductions associated with CAIR in redesignation actions, states would be forced to impose additional, redundant reductions on top of those achieved by CAIR. EPA believes this is precisely the type of irrational result the Court sought to avoid by ordering EPA to continue administering CAIR. For these reasons also, EPA believes it is appropriate to allow states to rely on CAIR, and the existing emissions reductions achieved by CAIR, as sufficiently permanent and enforceable for regulatory purposes, such as redesignations. Following promulgation of the replacement rule for CSAPR, EPA will review existing SIPs as

appropriate to identify whether there are any issues that need to be addressed.

b. Maintenance Plan Precursor Evaluation Resulting From Court Decisions

In this proposal EPA is also considering the impact of the D.C. Circuit Court's decision in *Natural Resources Defense Council v. EPA*, 706 F.3d 428 (D.C. Cir. 2013), on the maintenance plan required under sections 175A and 107(d)(3)(E)(iv) of the CAA. EPA believes that the only additional consideration related to the maintenance plan requirements that results from the D.C. Circuit Court's decision is that of assessing the potential role of VOC and ammonia in demonstrating continued maintenance in this area. Based on documentation provided by the state and supporting information, EPA believes that the maintenance plan for the Chicago area need not include any additional emission reductions of VOC or ammonia in order to provide for continued maintenance of the standard.

Emissions inventories used in the Regulatory Impact Analysis (RIA) (EPA-452/R-12-005, December 2012) for the 2012 PM2.5 NAAQS show that VOC and ammonia emissions in the Chicago area are projected to decrease by 59,126 TPY and 583 TPY, respectively between 2007 and 2020. See table 11 below. While the RIA emissions inventories are only projected out to 2020, there is no reason to believe that these downward trends would

not continue through 2025. Given that the Chicago-Gary-Lake County, IL-IN area is already attaining the 1997 annual PM2.5 standard, even with the current levels of VOC and ammonia emissions in the Chicago area, the downward trends in VOC and ammonia would be consistent with continued attainment of the 1997 annual PM2.5 standard. Even if ammonia emissions were to increase unexpectedly between 2020 and 2025, the overall emission reductions projected in SO₂, NO_x, primary PM2.5, and VOC would be sufficient to offset the increase in annual PM2.5 concentrations resulting from the increase in ammonia emissions. For these reasons, EPA believes that local ammonia (and VOC) emissions will not increase to the extent that they will cause monitored PM2.5 levels to violate the 1997 annual PM2.5 standard during the maintenance period.

Table 11. Comparison of 2007 and 2020 VOC and Ammonia Emissions Totals by Source Sector (TPY) for the Chicago Area Based on RIA Emissions Estimates for the 2012 PM2.5 NAAQS

Source Sector	VOC			Ammonia		
	2007	2020	Net Change 2007-2020	2007	2020	Net Change 2007-2020
Fires	442	442	0	31	31	0
Area	109,052	107,202	-1,850	8,865	9,135	270
Non-Road Mobile	46,784	25,007	-21,777	58	71	13
On-Road Mobile	53,688	19,133	-34,555	2,525	1,363	-1,162
Point	16,101	15,157	-944	332	628	296
Totals	226,067	166,941	-59,126	11,811	11,228	-583

E. Has Illinois Adopted Acceptable MVEBs for the PM2.5 Maintenance Period?

1. How Are MVEBs Developed and What Are the MVEBs for the Chicago Area?

Under section 176(c) of the CAA, transportation plans and Transportation Improvement Programs (TIPs) must be evaluated for conformity with SIPs. Consequently, Illinois's PM2.5 redesignation request and maintenance plan provide MVEBs, conformance with which will assure that motor vehicle emissions are at or below levels that can be expected to provide for attainment and maintenance of the 1997 annual PM2.5 standard. Illinois' redesignation request includes mobile source emission budgets for NOx and primary PM2.5 for 2008 and 2025. Table 12 shows the 2008 and 2025 MVEBs and 2025 "safety margins" (see discussion below) for the Chicago area. Table 12 also shows the estimated 2008 and 2025 mobile source emissions for the Chicago area. Illinois did not provide MVEBs for SO₂ because it concluded, consistent with EPA's presumptions regarding this PM2.5 precursor, that emissions of this pollutant from motor vehicles are not significant contributors to the Chicago area's PM2.5 air quality problem.

Table 12. 2008 and 2025 Motor Vehicle Emission Budgets for the Chicago Area (TPY)

Year	Estimated Emissions		Safety Margin		Motor Vehicle Emission Budgets	
	Primary	NOx	Primary	NOx	Primary	NOx

	PM2.5		PM2.5		PM2.5	
2008	5,100	127,951	--	--	5,100	127,951
2025	2,067	38,456	310	5,768	2,377	44,224

Table 12 shows substantial decreases in on-road mobile source NOx and primary PM2.5 emissions from 2008 to 2025. These emission reductions are expected because newer vehicles subject to more stringent emission standards are continually replacing older, higher emitting vehicles. EPA is proposing to approve the 2008 and 2025 MVEBs for the Chicago area into the SIP because, based on our review of the submitted PM2.5 maintenance plan, we have determined that the maintenance plan and MVEBs meet EPA's criteria found in 40 CFR 93.118(e)(4) for determining that MVEBs are adequate for use in transportation conformity determinations and are approvable because, when considered together with the submitted maintenance plan's projected emissions, they provide for maintenance of the 1997 annual PM2.5 standard in the Chicago-Gary-Lake County, IL-IN area.

2. What Are Safety Margins?

As noted in table 12, Illinois has included safety margins in the 2025 MVEBs. A safety margin is the amount by which the total projected emissions from all sources of a given pollutant are less than the total emissions which would satisfy the applicable requirement for reasonable further progress, attainment, or maintenance or a portion thereof (40 CFR 93.124(a)). The safety margins selected by IEPA would provide

for a 15 percent increase in mobile source emissions for 2025 above projected levels of these emissions. These safety margins are acceptable under EPA's transportation conformity requirements because they would not cause the total emissions in the Chicago area to exceed the attainment year levels.

F. Are the 2002 Base Year PM_{2.5}-Related Emissions Inventories for the Chicago Area Approvable Under Section 172(c)(3) of the CAA?

Section 172(c)(3) of the CAA requires states to submit a comprehensive, accurate, and current inventory of emissions for nonattainment areas. For PM_{2.5} nonattainment areas, states have typically submitted primary PM_{2.5}, SO₂, and NO_x emission inventories covering one of the years of the three-year period used to determine the nonattainment status of an area. For the 1997 annual PM_{2.5} standard, the annual PM_{2.5} concentrations for the years of 2001-2003 were used to establish the nonattainment status of areas. Illinois chose to submit PM_{2.5} emissions for 2002 for purposes of meeting the requirements of section 172(c)(3) of the CAA. Illinois documented these emissions and submitted this documentation to EPA in June 2006.

1. EPA's Base Year Emissions Inventory SIP Policy

EPA's SIP policy for base year emissions inventories for the 1997 annual PM_{2.5} standard is specified in three policy statements. EPA's main SIP requirements for a base year PM_{2.5}-

related emissions inventory are specified in section II.K of EPA's April 25, 2007 implementation rule for the 1997 annual PM_{2.5} standard (72 FR 20586, 20647). This rule requires the base year emissions inventory to be approved by the EPA as a SIP element (72 FR 20647), and requires the emissions inventory to cover the emissions of NO_x, SO₂, VOC, ammonia, and primary PM_{2.5} (72 FR 20648). The coverage of PM_{2.5} precursor emissions and emissions of primary PM_{2.5} (primary PM_{2.5} is also a precursor for secondary PM_{2.5} formation through atmospheric reactions) is required under 40 CFR part 51 subpart A and 40 CFR 51.1008 (72 FR 20648). Detailed emissions inventory guidance for PM_{2.5} (and other pollutants) is contained in EPA's "Emissions Inventory Guidance for Implementation of Ozone and Particulate Matter National Ambient Air Quality Standards (NAAQS) and Regional Haze Regulations" (August 2005, EPA-454/R-05-001). Finally, a November 18, 2002 policy memorandum titled "2002 Base Year Emission Inventory SIP Planning: 8-hr Ozone, PM_{2.5} and Regional Haze Programs" recommends that the PM_{2.5}-based emissions inventory be developed for a base year of 2002. It is noted that IEPA has generally followed all of these guidelines in the development of the base year emissions inventory for the PM_{2.5} SIP.

2. 2002 Base Year PM_{2.5}-Related Emission Inventories for the Chicago Area

Illinois documented the 2002 primary PM_{2.5}, NO_x, SO₂, VOC, ammonia, and CO emissions in a June 2006 document titled "Illinois Base Year Particulate Matter and Haze Inventory for 2002." This document covers emissions for the entire state of Illinois, and summarizes the emissions by source type and major source category for the PM_{2.5} nonattainment areas of Chicago and Metro-East St. Louis.

Emissions data for point, area, on-road mobile, off-road mobile and biogenic emission sources were developed for the 2002 emissions inventories by the IEPA. The primary sources of data for point sources were AERs submitted by individual source facilities and source permit files. The June 2006 emissions document covers in detail the derivation of emissions for each source type identified as a point source. Table 3-1 (page 34) of Illinois' June 2006 document includes the point source emission totals by county for each of the PM_{2.5} nonattainment areas. The Chicago area point source emission totals are summarized in table 13 below.

Area source emissions were generally derived by multiplying source category-specific emission factors by certain indicator levels of source activity (source surrogates), such as county populations, employment estimates, and commodity sales estimates. The emission estimation techniques for each source category are thoroughly documented in the June 2006 document.

The June 2006 document estimates the county-specific emissions by pollutant and by source type.

As discussed above, IEPA used EPA's NONROAD model to estimate 2002 off-road mobile source emissions for all non-road mobile source types except: (1) railroad locomotives; (2) aircraft operations (including aircraft auxiliary power units, landings, takeoffs, and other aircraft operating modes); and, (3) commercial marine vessels. For the three source types not covered by NONROAD modeling, Illinois obtained source activity data and emissions from the Lake Michigan Air Directors Consortium, who contracted with several consultants to derive emissions specific to the Chicago, Metro-East St. Louis and remaining areas in the state of Illinois.

IEPA used emission factors generated from EPA's MOBILE6 computer model and VMT and vehicle speeds by roadway facility type (or functional class), freeway, arterial, etc., supplied by the local planning agency (Chicago Area Transportation Study and IDOT for the Chicago area) to estimate 2002 on-road mobile source emissions. IEPA also used vehicle age and type distribution data supplied by IDOT. The vehicle activity information was derived for each county to allow the determination of emissions by county. IEPA summed up VMT and vehicle emissions for each month of 2002 to determine annual on-road mobile source emissions by county. All MOBILE6 inputs and VMT levels were

thoroughly documented. In addition to on-road emissions, IEPA also calculated stage II refueling (refueling of vehicles) emissions for the Chicago area.

Table 13 (taken from Table B-1 in Appendix B of IEPA's June 2006 document shows the 2002 primary PM2.5 and PM2.5 precursor emissions totals by major source category for the Chicago area.

Table 13. 2002 Fine Particulate and Precursor Emissions for the Chicago Area (TPY) Documented In Illinois' June 2006 PM2.5 Emissions Documentation

Source Type	Ammonia	NOx	Primary PM2.5	SO ₂	VOC
Point Sources	143.70	54,049.62	2,766.61	121,597.92	21,190.70
Area Sources	3,708.77	32,302.14	22,356.04	3,290.25	89,090.21
On-Road Mobile Sources	5,986.95	167,619.73	3,070.58	3,850.04	59,599.97
Off-Road Mobile Sources	46.29	87,426.24	4,834.30	3,742.62	53,272.30
Totals	9,885.71	341,397.73	33,027.53	132,480.83	223,153.18

After IEPA compiled the June 2006 document, IEPA revised the 2002 on-road mobile source emissions using EPA's MOVES mobile source emissions model. The derivation of the 2008 on-road mobile source emissions using MOVES is documented in the August 17, 2011, draft of IEPA's maintenance plan for the Chicago area. In this same document, IEPA indicates that the 2002 base year on-road mobile source emissions were recalculated using the same techniques. The 2002 emissions (including the MOVES-based on-road mobile source emissions) for the Chicago area are summarized in tables 3, 4, and 5 above.

We find that the state has thoroughly documented the 2002 emissions for primary PM2.5 and PM2.5 precursors in the Chicago area. We also find that Illinois has used acceptable techniques

and supporting information to derive these emissions.

Therefore, we are proposing to approve Illinois' 2002 base year emissions inventory for the Chicago area for purposes of meeting the emission inventory requirements of section 172(c)(3) of the CAA.

VI. Statutory and Executive Order Reviews

Under the CAA, redesignation of an area to attainment and the accompanying approval of a maintenance plan under section 107(d)(3)(E) are actions that affect the status of a geographical area and do not impose any additional regulatory requirements on sources beyond those imposed by state law. A redesignation to attainment does not in and of itself create any new requirements, but rather results in the applicability of requirements contained in the CAA for areas that have been redesignated to attainment. Moreover, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, these actions merely propose to approve state law as meeting Federal requirements and do not impose additional requirements beyond those imposed by state law and the CAA. For that reason, these proposed actions:

- are not "significant regulatory actions" subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- do not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- are certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- do not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- do not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- are not economically significant regulatory actions based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- are not significant regulatory actions subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- are not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and

- do not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this proposed rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because a determination of attainment is an action that affects the status of a geographical area and does not impose any new regulatory requirements on tribes, impact any existing sources of air pollution on tribal lands, nor impair the maintenance of ozone national ambient air quality standards in tribal lands.

List of Subjects

40 CFR Part 52

Environmental protection, Air pollution control,
Incorporation by reference, Intergovernmental relations,
Particulate matter.

40 CFR Part 81

Environmental protection, Air pollution control, National parks,
Wilderness areas.

Dated: July 22, 2013

Susan Hedman,
Regional Administrator, Region 5.